



# LS1000

Admin Guide

Installation, Configuration, Operation, & Troubleshooting



**Code Blue**

800.205.7186 • [www.codeblue.com](http://www.codeblue.com)

## **WARNING**

ONLY QUALIFIED PERSONNEL SHOULD INSTALL THIS UNIT. THE INSTALLATION SHOULD CONFORM TO ALL LOCAL CODES. IN SOME COUNTRIES, A CERTIFIED ELECTRICIAN MAY BE REQUIRED.

## **CAUTION**

No caution is necessary for this product.

## **NOTICE TO USERS**

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## Table of Contents

Section	Page
<b>1 Introduction .....</b>	<b>4</b>
<b>2 Getting Started .....</b>	<b>5</b>
<b>3 Power Requirements.....</b>	<b>6</b>
<b>4 Installation Instructions.....</b>	<b>10</b>
<b>5 How to Update Connectors .....</b>	<b>14</b>
<b>6 Wiring Diagrams.....</b>	<b>16</b>
<b>7 Schematics .....</b>	<b>17</b>
<b>8 Setting Up Your LS1000.....</b>	<b>19</b>
<b>9 In-Call Commands.....</b>	<b>42</b>
<b>10 Compatibility.....</b>	<b>43</b>
<b>11 Configuring for Cisco Unified Call Manager.....</b>	<b>44</b>
<b>12 Troubleshooting .....</b>	<b>48</b>
<b>13 Software Configuration.....</b>	<b>49</b>
<b>14 Remote Mount Beacon/Strobe Installation .....</b>	<b>50</b>
<b>15 S-1000/S-1050/S-2000 Beacon/Strobe Installation Instructions .....</b>	<b>51</b>
<b>16 Maintenance Schedule.....</b>	<b>54</b>
<b>17 Warranty.....</b>	<b>56</b>
<b>18 Additional Download Links .....</b>	<b>57</b>

## 1 Introduction

Thank you for choosing the Code Blue LS1000 full duplex VoIP speakerphone, handset, intercom, and paging device for indoor and outdoor applications. This speakerphone is part of our Emergency Signaling group of products built to meet the latest regulations, withstand the harshest elements and be proactive solutions for when you need them most. This guide provides basic and advanced configuration information for obtaining the best performance with the LS1000 phones.



Single Button



Double Button



Double Button w/ Keypad



Single Button w/ Camera



Double Button w/ Camera



Double Button W/ Keypad and Camera

### Call Privacy Laws

Some states require all parties to be aware that they are being recorded. Code Blue phones offer the ability to play a message stating that the caller is being recorded and giving the caller the option to continue or end the recorded call.

## 2 Getting Started

This guide contains information and a general overview for LS1000, including applications, installation, and wiring.

### LS1000 Features

- Single Button, Double Button, and Keypad configurations available
- SIP 2.0 Protocol Support
- 3 Ethernet Ports
- 3 auxiliary N.O. input contact closures
- 3 auxiliary N.O. output contact closures
- NEMA 3S Compliant
- UL 60950-22 and 62368-1 Compliant
- Peer-to-peer audio communication
- Multicast audio
- Multiple ADA compliant lettering choices with Braille

### 3 Power Requirements

The following table includes LS1000 and ALL OTHER Code Blue Devices and Enclosures for reference

Faceplates	Voltage	Max Current	Max Watts	Norm Current	Norm Watts	KWHrs
<b>IA4100</b>	24V AC	0.40	9.60	0.22	5.28	0.13
	12V DC	0.90	10.80	0.39	4.68	0.11
	24V DC	0.90	21.60	0.39	9.36	0.22
<b>IP5000</b>	24V AC	0.10	2.40	0.07	1.68	0.04
	12V DC	0.19	2.28	0.15	1.8	0.04
	24V DC	0.19	4.56	0.15	3.6	0.09
<b>Centry</b>	12V DC	0.50	6.00	0.38	4.56	0.11
<b>LS1000/LS2000</b>	12V DC	0.50	3.60	0.40	4.8	0.12
Lights	Voltage	Max Current	Max Watts	Norm Current	Norm Watts	KWHrs
<b>S-1000/S-2000 LED Strobe</b>	24V AC	0.28	6.72	0.22	5.28	0.13
	12V DC	0.26	3.12	0.24	2.88	0.07
	24V DC	0.26	6.24	0.24	5.76	0.14
<b>A-700 Area Light</b>	24V AC	1.80	43.20	0.83	19.92	0.48
	12V DC	2.68	32.16	0.38	4.56	0.11
	24V DC	2.68	64.32	0.38	9.12	0.22
<b>S-1050 LED Strobe W/ Photocell</b>	24V AC	0.28	6.72	0.22	5.28	0.13
	12V DC	0.27	3.22	0.24	2.88	0.07
	24V DC	0.27	6.43	0.24	5.76	0.14
<b>LED Light Bar</b>	24V AC	0.04	0.96	0.04	0.96	0.02
	12V DC	0.04	0.48	0.04	0.48	0.01
	24V DC	0.04	0.96	0.04	0.96	0.02
<b>WM180 PAS With LED Strobe</b>	24V AC	7.30	175.20	2.10	50.4	1.21

Models With IA4100 Faceplate	Voltage	Current	Watts	KWHrs
<b>CB 1-E</b>	24V AC	0.48	11.52	0.28
	12V DC	0.67	8.04	0.19
	24V DC	0.67	16.08	0.39
<b>CB 1-S</b>	24V AC	1.31	31.44	0.75
	12V DC	1.05	12.60	0.30
	24V DC	1.05	25.20	0.60
<b>CB 5-S</b>	24V AC	0.48	11.52	0.28
	12V DC	0.67	8.04	0.19
	24V DC	0.67	16.08	0.39
<b>CB 9-S</b>	24V AC	0.26	6.24	0.15
	12V DC	0.43	5.16	0.12
	24V DC	0.43	10.32	0.25
<b>CB 2-E</b>	24V AC	0.44	10.56	0.25
	12V DC	0.63	7.56	0.18
	24V DC	0.63	15.12	0.36
<b>CB 2-A</b>	24V AC	0.48	11.52	0.28
	12V DC	0.67	8.04	0.19
	24V DC	0.67	16.08	0.39
<b>CB 2-S</b>	24V AC	1.31	31.44	0.75
	12V DC	1.05	12.60	0.30
	24V DC	1.05	25.20	0.60
<b>CB 2-E W/ PAS</b>	24V AC	6.44	154.56	3.71
<b>CB 4-S</b>	24V AC	0.22	5.28	0.13
	12V DC	0.39	4.68	0.11
	24V DC	0.39	9.36	0.22
<b>CB 4-R</b>	24V AC	0.26	6.24	0.15
	12V DC	0.43	5.16	0.12
	24V DC	0.43	10.32	0.25
<b>CB 4-U</b>	24V AC	0.26	6.24	0.15
	12V DC	0.43	5.16	0.12
	24V DC	0.43	10.32	0.25
<b>Surface Mount/Flush Mount</b>	24V AC	0.22	5.28	0.13
	12V DC	0.39	4.68	0.11
	24V DC	0.39	9.36	0.22
<b>CB RT</b>	24V AC	0.48	11.52	0.28
	12V DC	0.67	8.04	0.19
	24V DC	0.67	16.08	0.39

Models With IP5000 Faceplate	Voltage	Current	Watts	KWHrs
<b>CB 1-E</b>	24V AC	0.33	7.92	0.19
	12V DC	0.43	5.16	0.12
	24V DC	0.43	10.32	0.25
<b>CB 1-S</b>	24V AC	1.16	27.84	0.67
	12V DC	0.81	9.72	0.23
	24V DC	0.81	19.44	0.47
<b>CB 5-S</b>	24V AC	0.33	7.92	0.19
	12V DC	0.43	5.16	0.12
	24V DC	0.43	10.32	0.25
<b>CB 9-S</b>	24V AC	0.11	2.64	0.06
	12V DC	0.19	2.28	0.05
	24V DC	0.19	4.56	0.11
<b>CB 2-E</b>	24V AC	0.29	6.96	0.17
	12V DC	0.39	4.68	0.11
	24V DC	0.39	9.36	0.22
<b>CB 2-A</b>	24V AC	0.33	7.92	0.19
	12V DC	0.43	5.16	0.12
	24V DC	0.43	10.32	0.25
<b>CB 2-S</b>	24V AC	1.16	27.84	0.67
	12V DC	0.81	9.72	0.23
	24V DC	0.81	19.44	0.47
<b>CB 2-E / PAS</b>	24V AC	6.44	154.56	3.71
<b>CB 4-S</b>	24V AC	0.07	1.68	0.04
	12V DC	0.15	1.8	0.04
	24V DC	0.15	3.6	0.09
<b>CB 4-R</b>	24V AC	0.11	2.64	0.06
	12V DC	0.19	2.28	0.05
	24V DC	0.19	4.56	0.11
<b>CB 4-U</b>	24V AC	0.11	2.64	0.06
	12V DC	0.19	2.28	0.05
	24V DC	0.19	4.56	0.11
<b>Surface Mount/Flush Mount</b>	24V AC	0.07	1.68	0.04
	12V DC	0.15	1.8	0.04
	24V DC	0.15	3.6	0.09
<b>CB RT</b>	24V AC	0.33	7.92	0.19
	12V DC	0.43	5.16	0.12
	24V DC	0.43	10.32	0.25

Models with LS1000/LS2000	Voltage	Current	Watts	KWHrs
CB 1-E	12V DC	0.68	8.16	0.20
CB 1-S	12V DC	1.06	12.72	0.31
CB 5-S	12V DC	0.68	8.16	0.20
CB 9-S	12V DC	0.44	5.28	0.13
CB 2-E	12V DC	0.64	7.68	0.18
CB 2-A	12V DC	0.68	8.16	0.20
CB 2-S	12V DC	1.06	12.72	0.31
CB 4-S	12V DC	0.40	4.80	0.12
CB 4-R	12V DC	0.44	5.28	0.13
CB 4-U	12V DC	0.44	5.28	0.13
Surface Mount/Flush Mount	12V DC	0.40	4.80	0.12
CB RT	12V DC	0.68	8.16	0.20

High Voltage AC Components	Voltage	Current	Watts	KWHrs
Multi-Tap Power Supply	120V AC	1.75A/210VAC	210	5.04
Din Rail Power Supply	120V AC	1.2A/115VAC	115	2.76
Heater -DFB	120V AC	1.6	192	4.61
DC - PS DFB	120V AC	2.6	312	7.49
PAS Amp	120V AC	3.83	459.6	11.03

High Voltage Models	Voltage	Current	Watts	KWHrs
CB 1 DFB	120V AC	3.35	402	9.6
CB 2 DFB	120V AC	3.35	402	9.6
CB 1 PAS	120V AC	3.83	460	11
CB 5 PAS	120V AC	3.33	400	9.6
CB 1-s w/ NightCharge	120V AC	2.5	300	2.4
CB 4-U w/ NightCharge	120V AC	2.5	300	2.4

## 4 Installation Instructions

### Legal Considerations

Video and audio surveillance can be regulated by laws that vary from country to country. Check the laws in your local region before using this product for surveillance purposes. [Liability](#)

Every care has been taken in the preparation of this document. Please inform Code Blue Corporation of any inaccuracies or omissions. Code Blue cannot be held responsible for any technical or typographical errors and reserves the right to make changes to the product and manuals without prior notice. Code Blue makes no warranty of any kind with regard to the material contained within this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Code Blue shall not be liable or responsible for incidental or consequential damages in connection with the furnishing, performance or use of this material. This product is only to be used for its intended purpose.

### Intellectual Property Rights

Code Blue Corporation has intellectual property rights relating to technology embodied in the product described in this document. This product contains open source code that also contains additional open source libraries.

### Equipment Modifications

This equipment must be installed and used in strict accordance with the instructions given in the user documentation. This equipment contains no user-serviceable components. Unauthorized equipment changes or modifications will invalidate all applicable regulatory certifications and approvals.

### Trademark Acknowledgments

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### Regulatory Information

#### Electromagnetic Compatibility (EMC)

This equipment has been designed and tested to fulfill applicable standards for:

- Radio frequency emission when installed according to the instructions and used in the intended environment.
- Immunity to electrical and electromagnetic phenomenon when installed according to the instructions and used in its intended environment.

### USA

This equipment has been tested using a shielded network cable (STP) and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense. The product shall be connected using a shielded network cable (STP) that is properly grounded.

### Canada

This digital apparatus complies with CAN ICES-3 (Class A). The product shall be connected using a shielded network cable (STP) that is properly grounded. Cet appareil numérique est conforme à la norme NMB ICES-3 (classe A). Le produit doit être connecté à l'aide d'un câble réseau blindé (STP) qui est correctement mis à la terre.

### Safety

This product complies with 62638-1/UL 60950-1 and 62638-1/UL 60950-22, Safety of Information Technology Equipment. The product shall be grounded either through a shielded network cable (STP) or other appropriate method. The power supply used with this product shall fulfill the requirements for Safety Extra Low Voltage (SELV) and Limited Power Source (LPS) according to IEC/EN/UL 60950-1. This unit complies with IP54/NEMA 3 and IEC 61969-3 Class 1 specifications.

### Warranty

Code Blue Corporation provides a limited warranty on this product. Refer to your sales agreement to establish the terms. In addition, Code Blue's standard warranty language, as well as information regarding support for this product while under warranty, is available at [www.codeblue.com/support/downloads](http://www.codeblue.com/support/downloads).

### In Case of Breakdown

In case of system breakdown, discontinue use and contact Tech Support at [ts@codeblue.com](mailto:ts@codeblue.com) or call (800) 205-7186, option 3.

### In Case of Abnormal Operation

If the unit emits smoke or an unusual smell, if water or other foreign material enters the enclosure, or if you drop the unit or damage the enclosure, power off the unit immediately and contact:

Code Blue Customer Service at [customerservice@codeblue.com](mailto:customerservice@codeblue.com) or (800) 205-7186, option 2.

### Disposal and Recycling

When this product has reached the end of its useful life, dispose of it according to local laws and regulations. For information about your nearest designated collection point, contact your local authority responsible for waste disposal. In accordance with local legislation, penalties may be applicable for incorrect disposal of this waste.

This guide should contain all the information needed for your application. If any further information is needed, please contact [customerservice@codeblue.com](mailto:customerservice@codeblue.com).

### Support

Should you require any technical assistance, please contact Code Blue. Visit [codeblue.com](http://codeblue.com) to:

- Download user documentation and software.
- Find answers to resolved problems in the FAQ database.  
Report problems to Code Blue Technical Support via email at [ts@codeblue.com](mailto:ts@codeblue.com) or 800-205-7186

## Safety Information

## Hazard Levels

### **DANGER**

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### **WARNING**

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **NOTICE**

Indicates a situation which, if not avoided, could result in damage to property.

## Other Message Levels

### **Important**

Indicates significant information that is essential for the product to function correctly.

### **Note**

Indicates useful information that helps get the most out of the product.

## Safety Instructions

### **WARNING**

- Code Blue products shall be installed by trained professionals.

### **NOTICE**

- Code Blue products shall be used in compliance with local laws and regulations.
- Store the Code Blue product in a dry and ventilated environment.
- Do not install the product on unstable brackets, surfaces or walls.
- Use only applicable tools when installing Code Blue products.
- Do not use chemicals, caustic agents, or aerosol cleaners other than those tested and recommended by Code Blue.
- Use only accessories that comply with technical specifications of the product. These can be provided by Code Blue or a third party.
- Use only spare parts provided by or recommended by Code Blue.
- Do not attempt to repair the product by yourself. Contact Code Blue or your Code Blue reseller for service.

## Transportation

### **NOTICE**

- When transporting a Code Blue product, use the original packaging or equivalent to prevent damage to the product.

## What's Included

<b>LS1000 - Camera Phone</b>	
<b>Quantity</b>	<b>Part</b>
1	Enclosure (Surface or Flush)
6	Security Screws
1	Faceplate / Circuit board with Integrated IP Color Camera

**LS1000 faceplate tools needed for installation:**

1. Drill and screws to mount unit to wall.
2. Code Blue Security bit and any 1/4" bit drive handle.

**Basic Flush Mount Installation Instructions for use by Installers:**

1. Remove six security screws with Code Blue security bit and any 1/4" bit driver tool.
2. Separate LS1000 from enclosure and set aside carefully. The flush mount enclosure will come with no mounting holes. It can be mounted from the sides, top or bottom. Once your mounting needs have been determined, drill the holes needed for your specific installation requirements into the flush mount back box.
3. Mark the mounting holes onto the mounting surface. In order to comply with the Americans with Disabilities Act (ADA) of 1990, the speakerphone button(s) should be positioned between 34 and 48 inches from grade level. (Consult an ADA specialist in your area to verify local and federal guidelines.)
4. Connect earth ground to the provided copper grounding lug using a minimum 14-gauge conductor.
5. Connect electrical and communications wiring using the wiring diagram below.
6. Follow all federal and local codes that apply.
7. Attach faceplate to enclosure using six security screws.

**Basic Surface Mount Installation Instructions for user by Installers:**

1. Remove six security screws with Code Blue security bit and any 1/4" bit driver tool.
2. Separate LS1000 from enclosure and set aside carefully.
3. Mark the mounting holes onto the mounting surface. In order to comply with the Americans with Disabilities Act (ADA) of 1990, the speakerphone button(s) should be positioned between 34 and 48 inches from grade level. (Consult an ADA specialist in your area to verify local and federal guidelines.)
4. Drill all marked holes.

5. Secure the housing to the wall – If you are securing to drywall, utilize drywall screws and anchors. If you are securing to metal, utilize sheet metal screws. If you are securing to brick, use Tapcon screws. Fasten all screws securely.

**Important:** Ensure that conduit is aligned with wiring.

7. Connect earth ground to the provided copper grounding lug using a minimum 14-gauge conductor.

8. Connect electrical and communications wiring using the wiring diagram below.

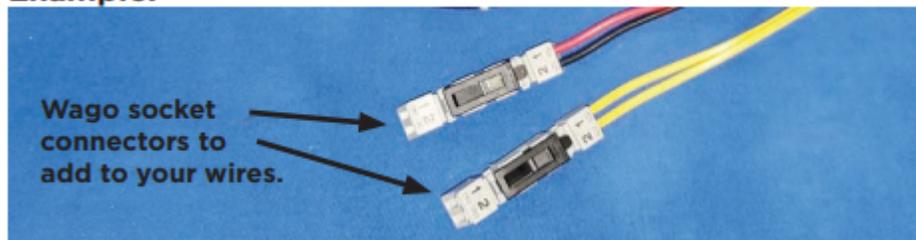
9. Follow all federal and local codes that apply.

Attach faceplate to enclosure using six security screws.

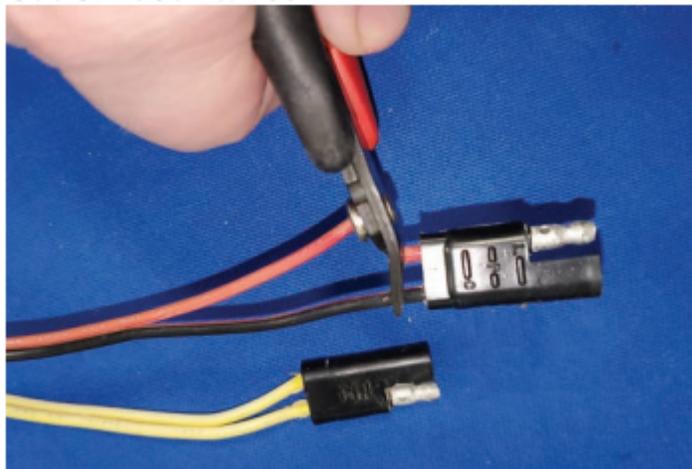
## 5 How to Update Connectors

As of 2020, many Code Blue products come with Wago connectors. These connectors provide ease of use and a much stronger connection. Below are the steps needed to change to the new connectors.

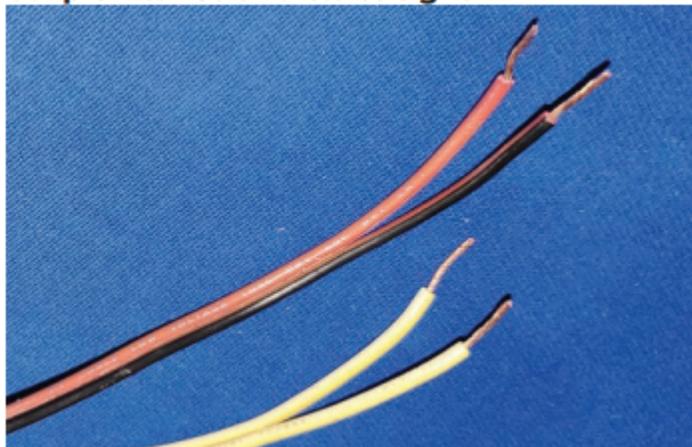
### Example:



### Cut off both wires.



### Strip all wires and twist tight.

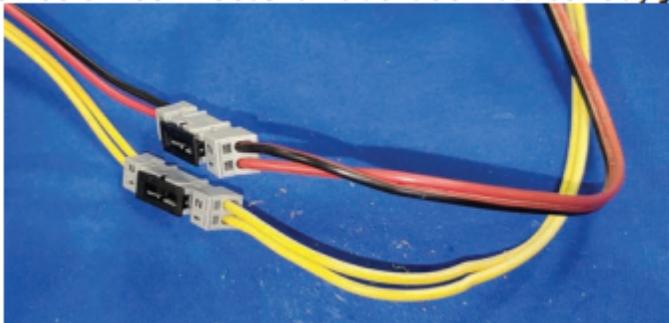




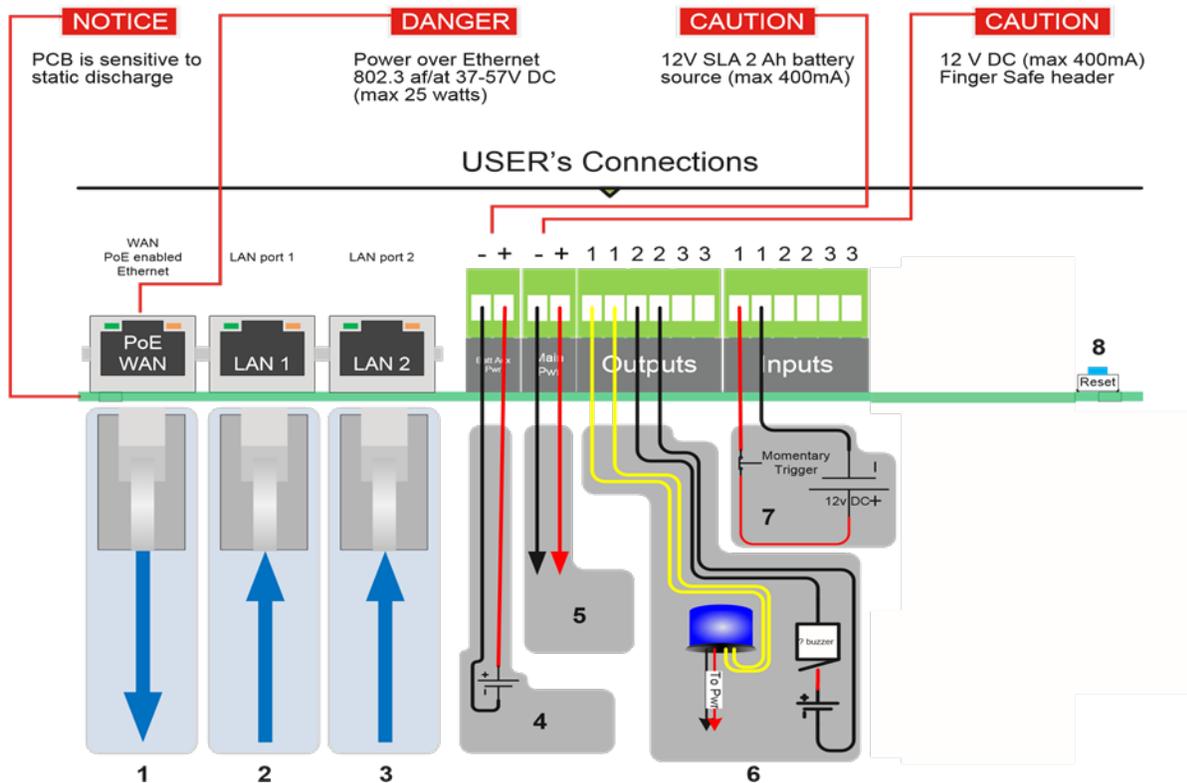
**Place small screwdriver into square hole and push down. Insert cut wire into round hole and remove screwdriver. Repeat on the rest of the connectors.**



**Once all connectors have been switched, you are ready to apply power.**



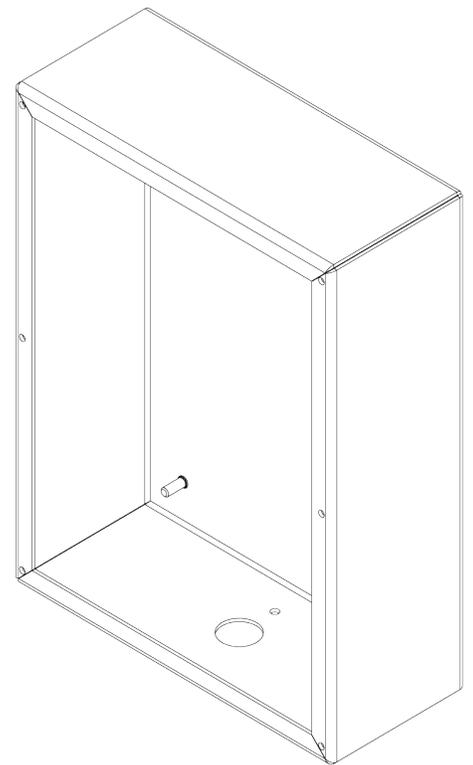
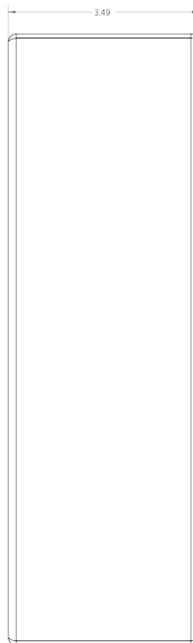
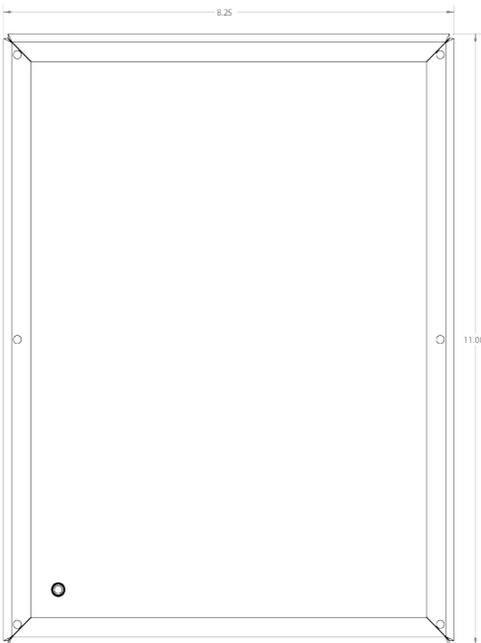
## 6 Wiring Diagrams



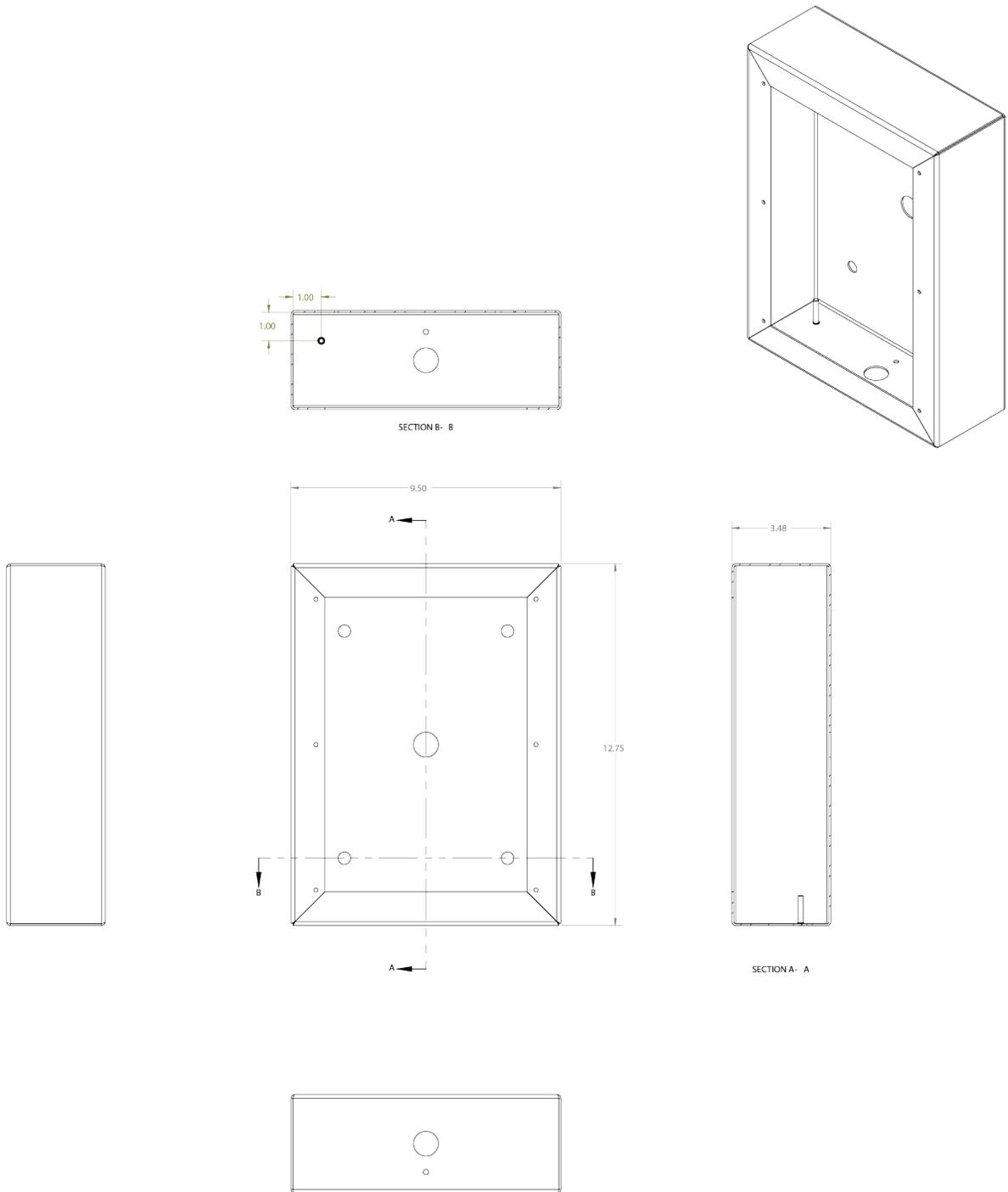
- 1 - Cat 5e - Connect to Switch (100 Mb)
- 2 - Cat 5e - Connect to Peripheral (100 Mb) 3 - Cat 5e - Connect to Peripheral (100 Mb)
- 4 - Optional 12V battery
- 5 - 12V DC power
- 6 - Aux outputs (3)
  - The auxiliary outputs are Normally Open and can be triggered in your action script to close. Duration is defined in your action script.
- 7 - Aux inputs (3)
  - The auxiliary inputs are Normally Open and are triggered by voltage. The voltage range is 9 to 32V AC or DC with current protection of 1.25 Amps.
- 8 - Factory Reset Switch
  - With power connected to LS2000, hold down this reset switch for 12 seconds and then release. The unit will reboot. All settings will be lost.

## 7 Schematics

### 7.1.1 Flush Mount Mounting Schematics



## 7.1.2 Surface Mount Mounting Schematics



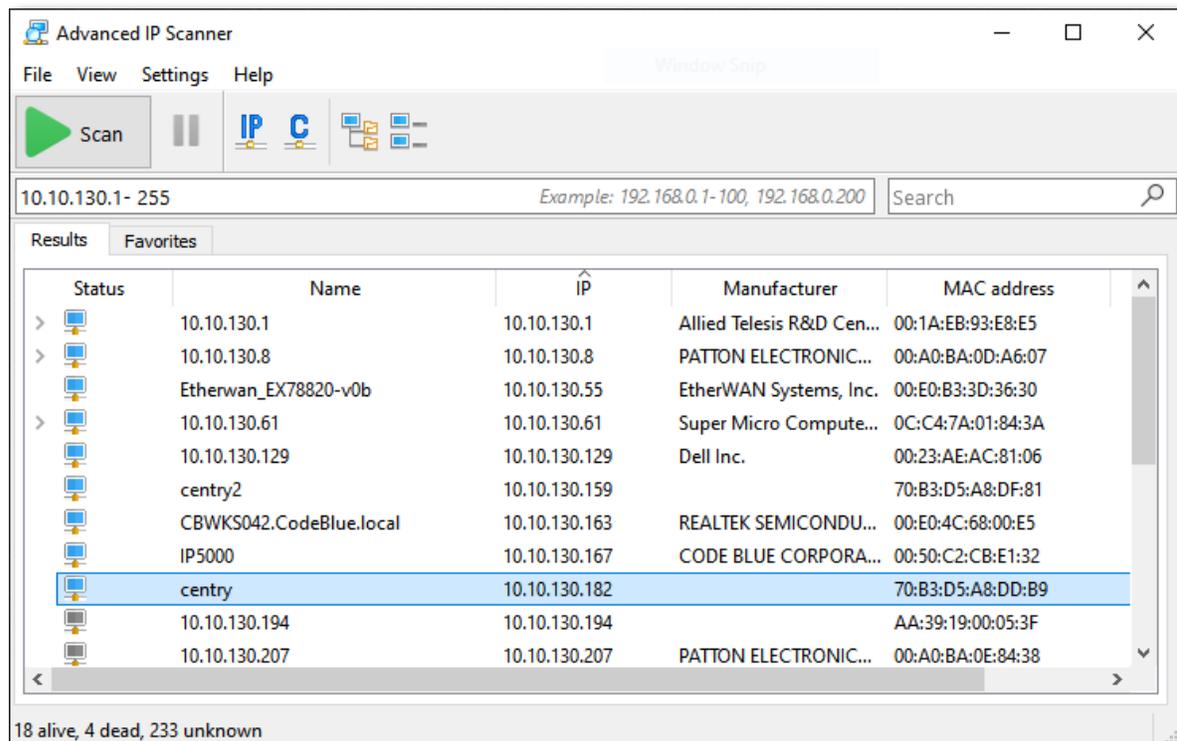
## 8 Setting Up Your LS1000

### Determine the IP Address

Once you can browse into the device, you can switch to a static IP if desired.

Connect the LS1000 to your DHCP Network. The “Call Placed” red LED will flash while the device is booting up. The LS1000 will acquire its network settings from the DHCP server on the network. If the network is not running DHCP the device will default to the IP address of 192.168.0.249 after one minute.

If you do not have network scanner software, you can download many free ones. “Advanced IP Scanner” is one example. Run a scan of the subnet the LS1000 device is plugged into, and your PC if plugged into the same network.

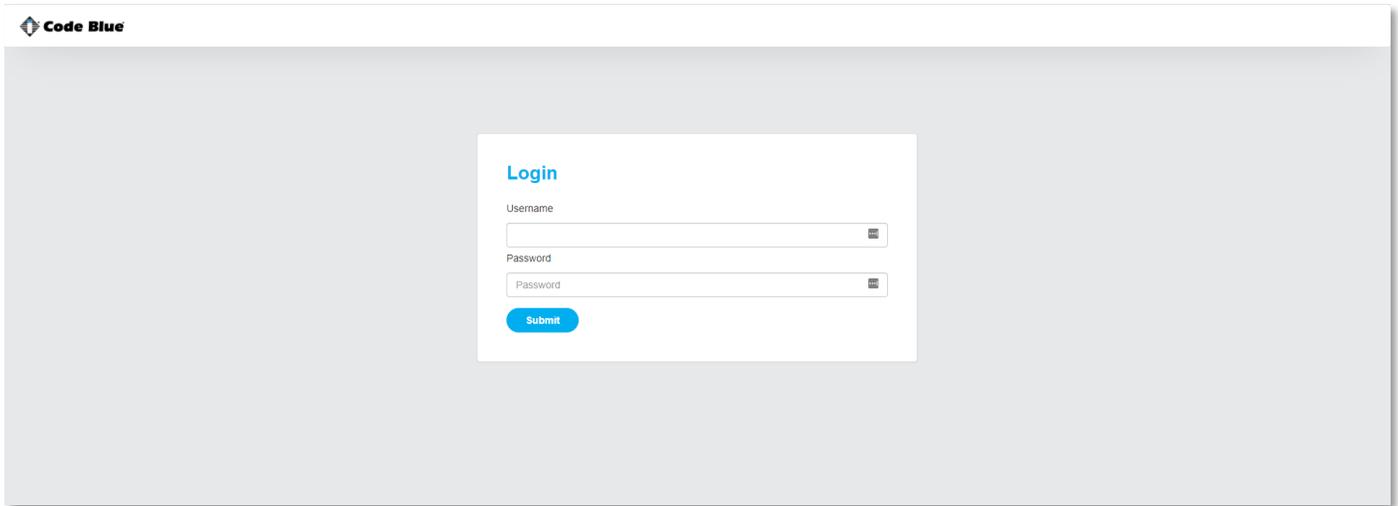


You can find the IP address for your LS1000 speakerphone by matching its MAC address. You can then browse to the IP address of the device. The recommended web browsers are Google Chrome and Mozilla Firefox. You may experience erratic behavior with other browsers.

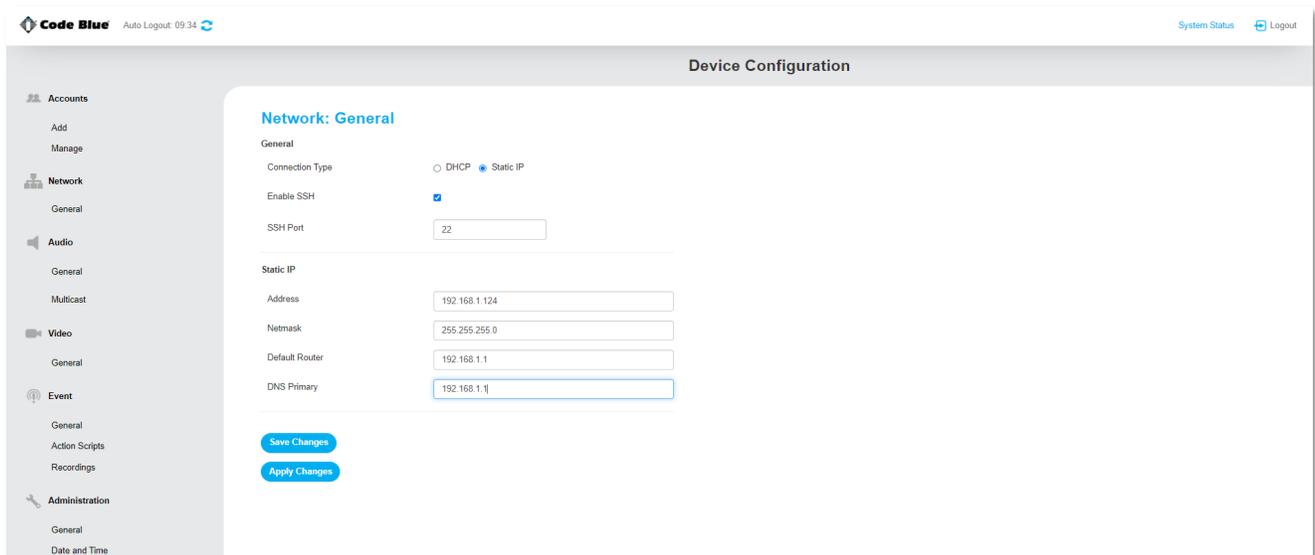
**Default login information is:**

Username: admin

Password: admin

**Network - General Settings**

Once logged into the device, you can change the Network Settings in General Settings under Network if you want to switch over to a static IP address.



Generally, you can leave the Host and Domain fields empty.

SSH Port 22 is enabled by default. You can change the Port and disable it, if desired.

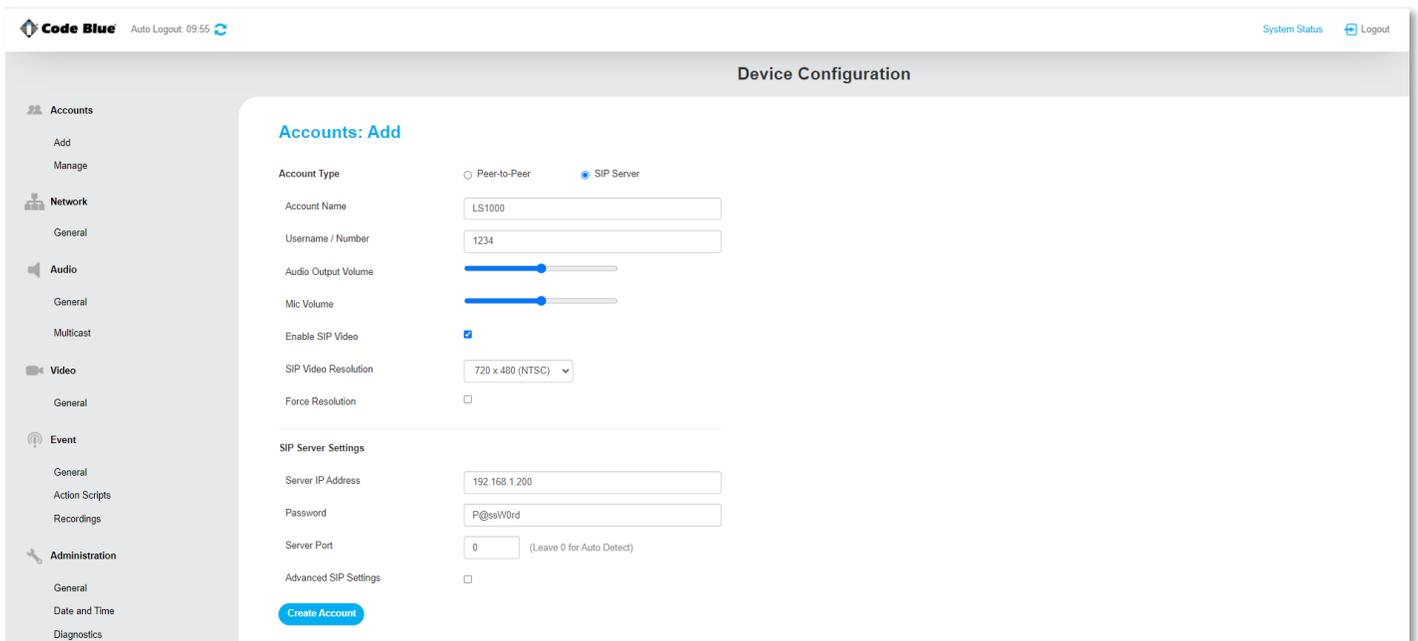
If limiting Network Ports, then the ports to have open are:

- tcp 22 SSH Secure Shell Protocol (Configurable)
- tcp 53 DNS Domain Name Service over TCP
- udp 53 DNS Domain Name Service over UDP
- tcp 80 HTTP Hyper Text Transfer Protocol
- tcp 161 SNMP Simple Network Management Protocol
- tcp 162 SNMP Trap Simple Network Management Protocol Trap
- tcp 443 SSL Secure Socket Layer (Deprecated)
- udp 554 RTSP Real Time Streaming Protocol
- udp 554 RTSP Real Time Streaming Protocol
- udp 5060 SIP Session Initiation Protocol
- tcp 5061 SIP Session Initiated Protocol
- rtp 16384-32767 Real Time Transport (Configurable)

## Accounts

### Add Account

These settings are usually provided by IP PBX, SIP server or SIP gateway personnel. When setting up a SIP or peer-to-peer account, make sure the correct Account Type is selected



**Account Name:** Free form field to identify the account.

**Username/Number:** Phone number or extension for the LS1000. This is still required for peer-to-peer; Any number value can be entered.

**Speaker Volume:** You can set the speaker volume gain here in the GUI, as well as from a touch-tone phone using in-call commands. This becomes the default volume level.

**Mic Volume:** You can set the mic volume gain here in the GUI, as well as from a touch-tone phone. using in-call commands. This becomes the default volume level.

**Enable SIP Video:** Select this option to allow SIP video packets to be transmitted. RTSP video will still be available but note that only one format will be available at a time.

**SIP Video Resolution:** Use drop down menu to select resolution for SIP video. This does not apply to RTSP video quality.

**Force Resolution:** Some desk phones will overwrite the resolution set in the LS1000 to their native resolution. Select this option to force the selected resolution.

## SIP Server Settings

**Server IP Address:** You can use the domain name or IP address of your IP PBX, SIP Gateway, SBC or whatever you register SIP devices to.

**Password:** This is the shared SIP secret password that the phone and your SIP registration server share.

**Server Port:** 0 for auto detect. Commonly may be 5060. If necessary, you may have to specify a port here.

## Advanced SIP Settings

**Transport Protocol:** IPv4 or IPv6.

**Communication Protocol:** UDP or TCP.

**Registration Lifetime:** Default is 600 seconds. This is the time the phone will attempt re-registration if not contacted by the SIP server.

**Keep Alive:** Check if you want keep-alive messages sent between the SIP server and the phone.

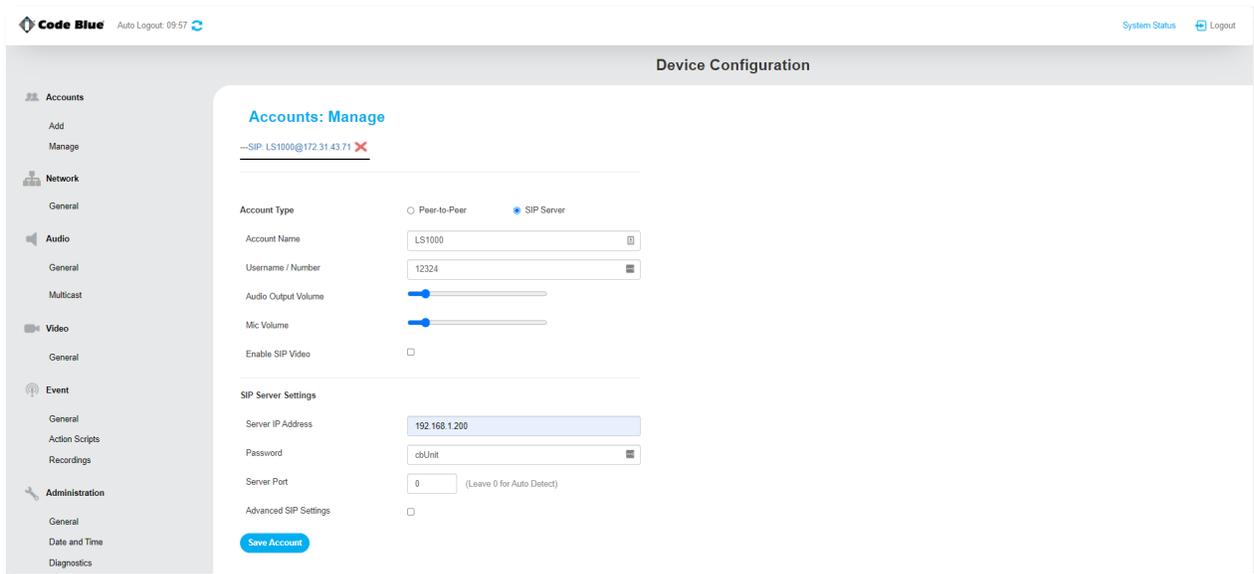
**Use a Proxy Server:** If using a proxy server in addition to a SIP server, then specify the IP Address or Domain, SIP Authentication ID and Outbound Proxy Port used.

## Manage Accounts

After adding an account, you can manage the created accounts on this page.

Note: You can create a near infinite to different SIP servers. Generally, only one is used.

Click onto an account to manage it for viewing or to make changes.



The screenshot displays the Code Blue web interface for managing SIP accounts. The page title is "Accounts: Manage" and it shows configuration for a SIP Server account named "LS1000".

**Account Type:** Peer-to-Peer (unselected), SIP Server (selected)

**Account Name:** LS1000

**Username / Number:** 12324

**Audio Output Volume:** [Slider]

**Mic Volume:** [Slider]

**Enable SIP Video:**

**SIP Server Settings:**

- Server IP Address:** 192.168.1.200
- Password:** cbUnit
- Server Port:** 0 (Leave 0 for Auto Detect)
- Advanced SIP Settings:**

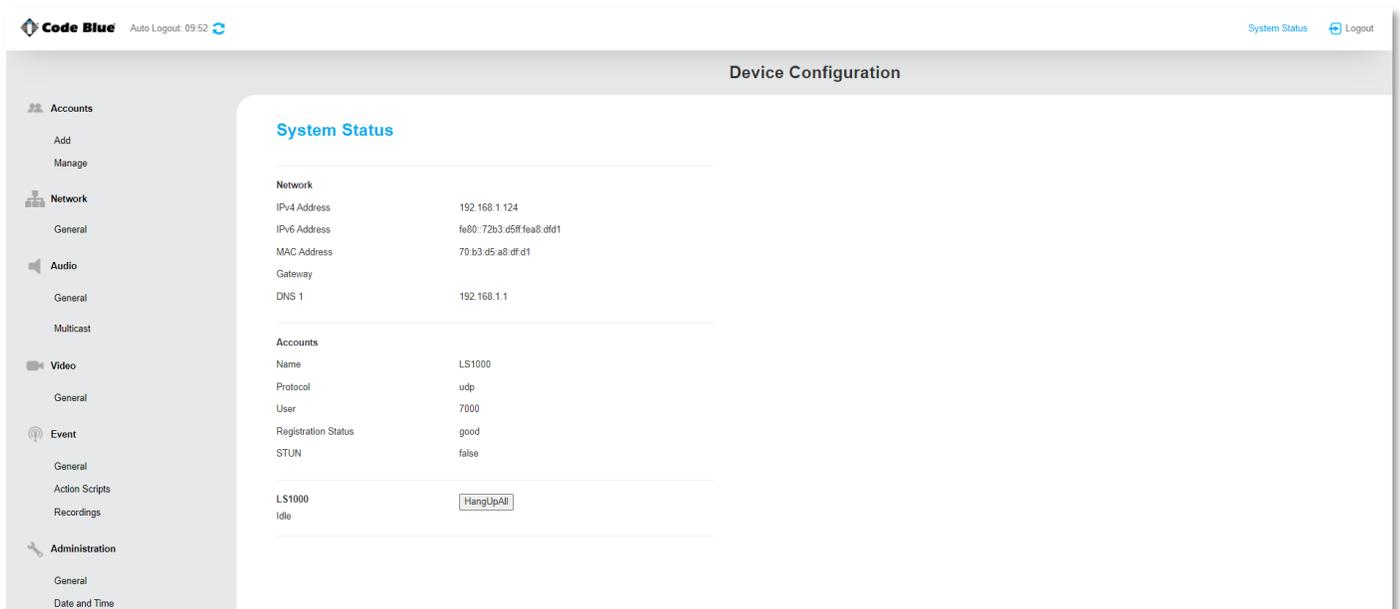
**Save Account** button is visible at the bottom.

## System Status

After creating your account and providing the SIP server, check the registration status on the System Status page. This is located in the top right corner of the screen.

In this screen, you can see the current IP address of the phone, which is the same for the camera.

It also will display the current registration status of the configured accounts. Registration status of “good” is what you are looking for. If it is not, investigate the matching account settings configured in the SIP server and if the network has been opened in between.



The screenshot shows the Code Blue web interface. The top header includes the Code Blue logo, "Auto Logout: 09:52", and "System Status Logout" links. The main content area is titled "Device Configuration" and contains a "System Status" section. This section is divided into three parts: Network, Accounts, and a specific account entry for "LS1000".

Network	
IPv4 Address	192.168.1.124
IPv6 Address	fe80:72b3:d5ff:fea8:dfd1
MAC Address	70:b3:d5:a8:df:d1
Gateway	
DNS 1	192.168.1.1

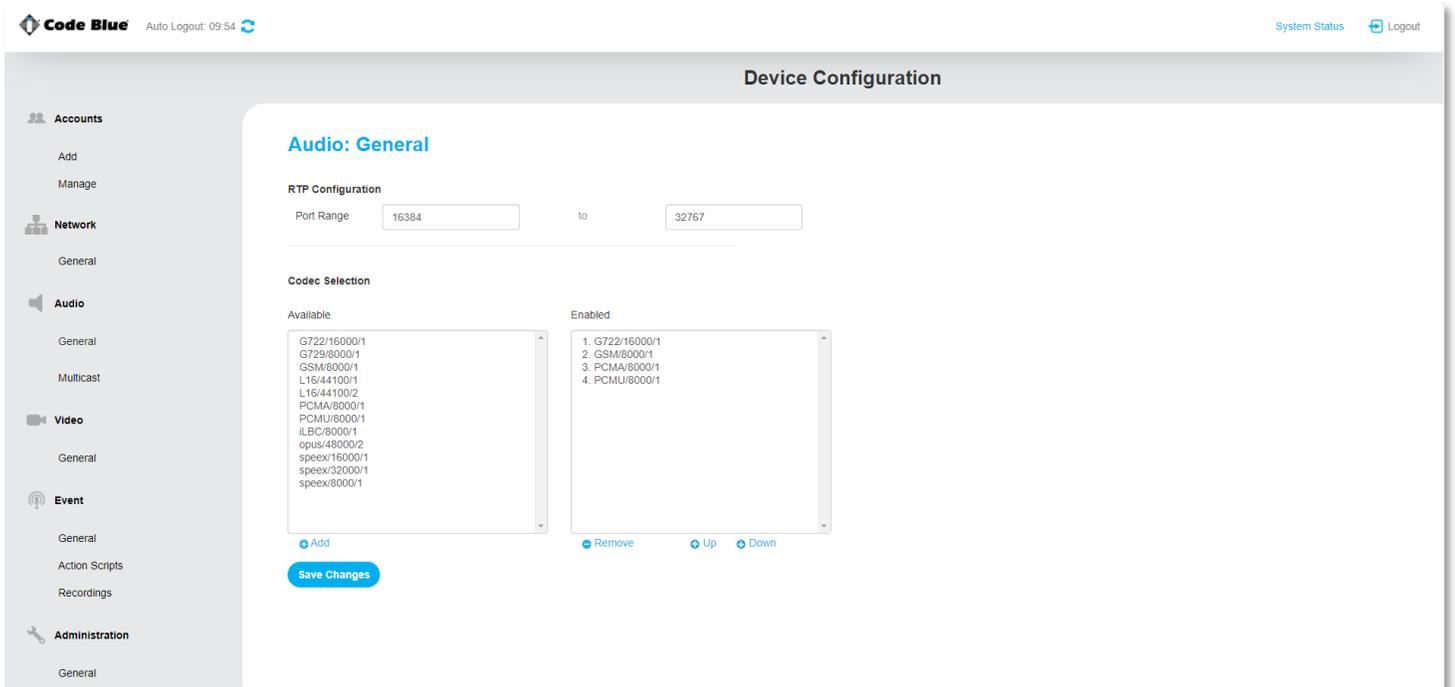
Accounts	
Name	LS1000
Protocol	udp
User	7000
Registration Status	good
STUN	false

LS1000	
Idle	<input type="button" value="HangUpAll"/>

## Audio

Default RTP Ports and Codecs are listed here. These can be adjusted based on the needs of the SIP or PBX server.



The screenshot displays the Code Blue web interface for the "Audio: General" configuration page. The page is titled "Device Configuration" and includes a sidebar with navigation options: Accounts, Network, Audio, Video, Event, and Administration. The main content area is titled "Audio: General" and contains the following configuration options:

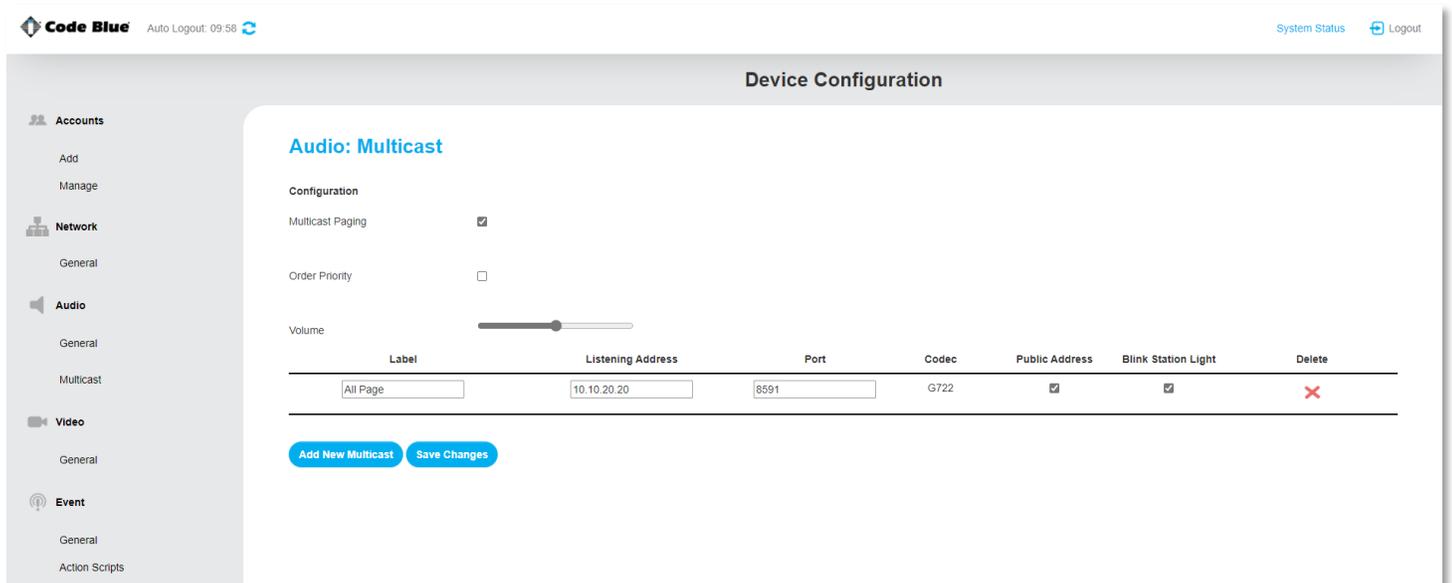
- RTP Configuration:** Port Range is set to 16384 to 32767.
- Codec Selection:** A list of available codecs is shown on the left, and a list of enabled codecs is shown on the right. The enabled list includes:
  1. G722/16000/1
  2. GSM/8000/1
  3. PCMA/8000/1
  4. PCMU/8000/1

Buttons for "Add", "Remove", "Up", and "Down" are located below the codec lists. A "Save Changes" button is positioned at the bottom of the configuration area.

## Multicast Audio

To add a new multicast configuration, enter a Label, the Listening IP address and Port.

To change the priority of the multicast, simply drag and drop. A phone call priority level also can be set with the Order Priority box checked. By default, the Phone Call Priority is set to 0.



**Code Blue** Auto Logout: 09:58 System Status Logout

### Device Configuration

#### Audio: Multicast

**Configuration**

Multicast Paging

Order Priority

Volume

Label	Listening Address	Port	Codec	Public Address	Blink Station Light	Delete
All Page	10.10.20.20	8591	G722	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add New Multicast](#) [Save Changes](#)

## General Video

The default settings of RTSP can be adjusted on this page (SIP Video is controlled in the Account settings).

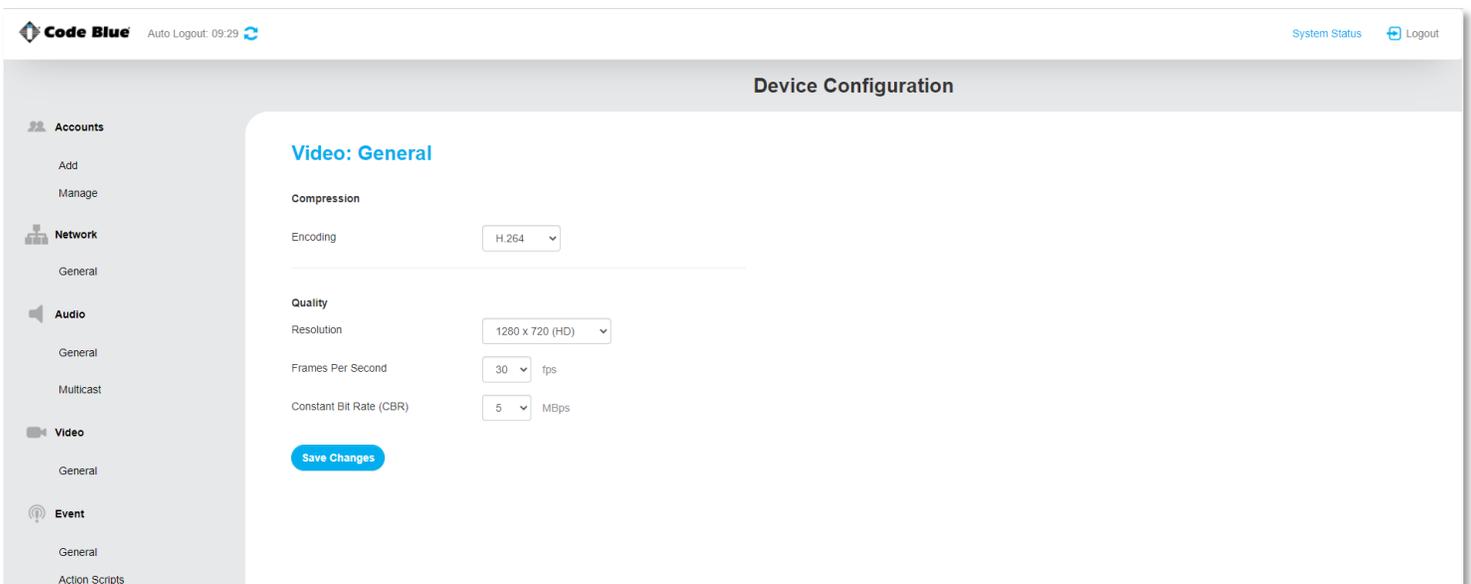
The camera and the phone share the same IP address.

You can view the camera stream using either Code Blue ToolVox® with Blue Alert® EMS or your own VMS or video stream software. (Example: VLC Media Player.)

### The RTSP Stream format is as follows:

rtsp://<LS1000 IP address>/codeblue

To determine the network bandwidth utilized with your compression and quality options, you can use an online bandwidth calculator such as [www.cctvcalculator.net/en/calculations/bandwidth-calculator](http://www.cctvcalculator.net/en/calculations/bandwidth-calculator).



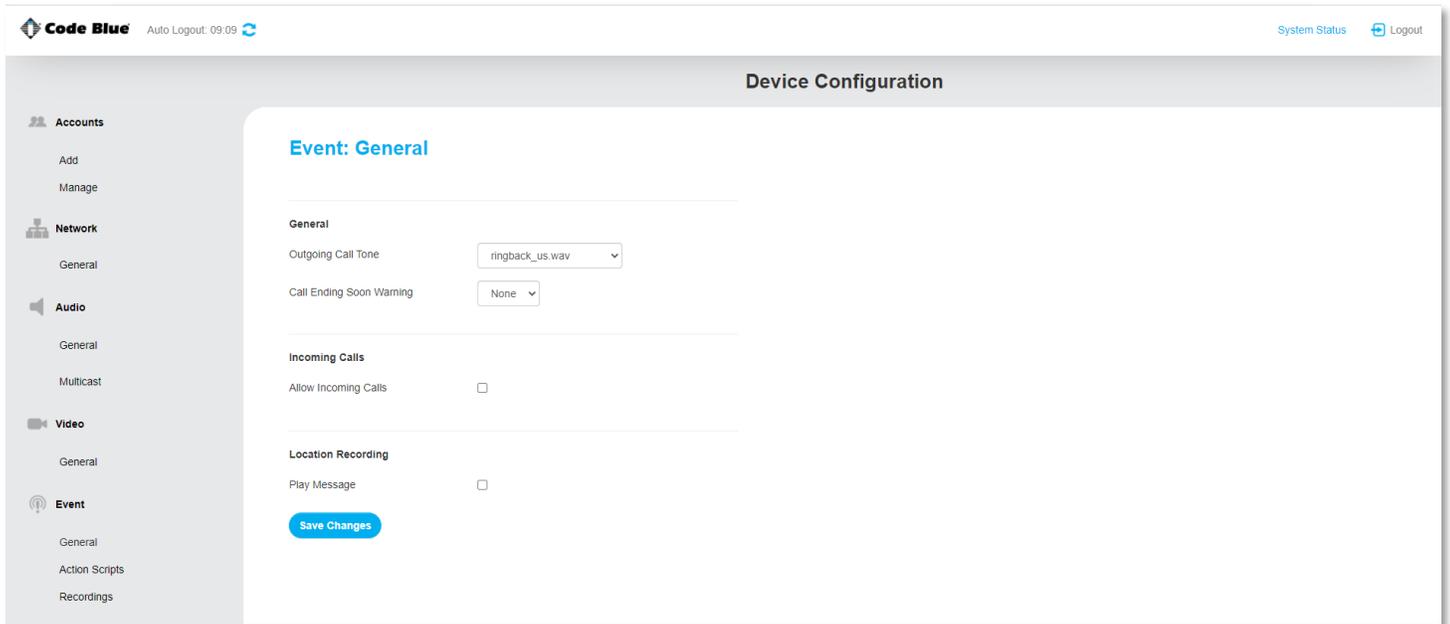
The screenshot shows the Code Blue web interface. At the top left is the Code Blue logo and "Auto Logout: 09:29". At the top right are "System Status" and "Logout" links. The main header is "Device Configuration". On the left is a sidebar menu with categories: Accounts (Add, Manage), Network (General), Audio (General, Multicast), Video (General), and Event (General, Action Scripts). The main content area is titled "Video: General" and contains the following settings:

- Compression**
  - Encoding: H.264
- Quality**
  - Resolution: 1280 x 720 (HD)
  - Frames Per Second: 30 fps
  - Constant Bit Rate (CBR): 5 Mbps

A "Save Changes" button is located at the bottom of the settings area.

## General Events

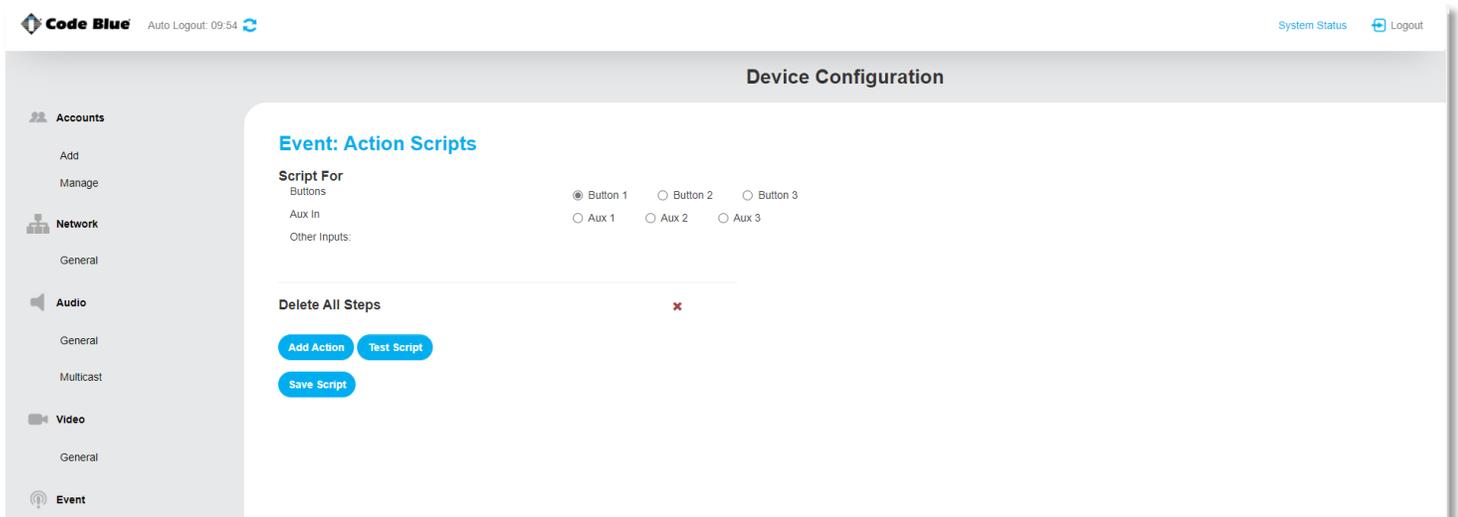
In the General Events setting you can alter the outgoing call tone, apply a call ending warning, allow or disallow incoming calls and apply location recordings.



The screenshot displays the Code Blue web interface for Device Configuration. The top navigation bar includes the Code Blue logo, an auto-logout timer at 09:09, and links for System Status and Logout. A left sidebar menu lists categories: Accounts (Add, Manage), Network (General), Audio (General, Multicast), Video (General), and Event (General, Action Scripts, Recordings). The main content area is titled "Device Configuration" and shows the "Event: General" configuration page. This page is divided into three sections: "General" with "Outgoing Call Tone" (set to ringback\_us.wav) and "Call Ending Soon Warning" (set to None); "Incoming Calls" with "Allow Incoming Calls" (unchecked); and "Location Recording" with "Play Message" (unchecked). A "Save Changes" button is located at the bottom of the configuration area.

## Action Scripts

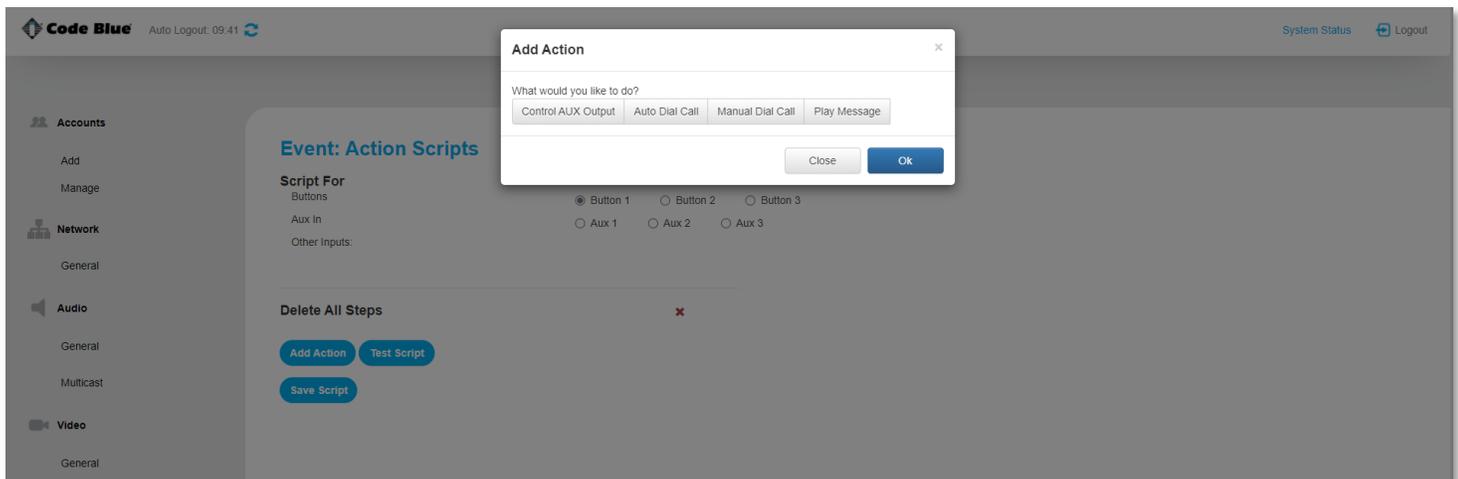
Action Scripts determine what happens when a button is pushed, or aux input is activated. If you have a multi-button phone the red button is button 1.



Select the button or aux input you would like to associate and action with.

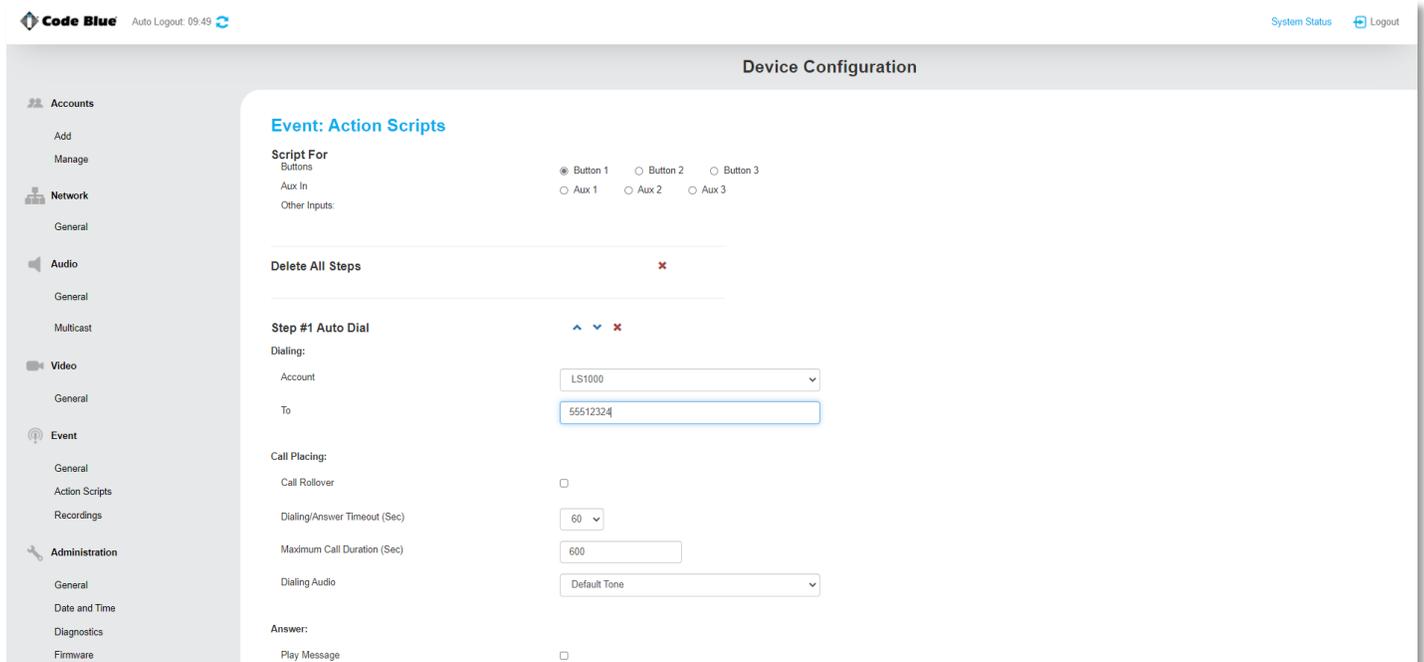
Choose “Add Action”

You can choose to have an aux output triggered, place a call, or simply play a message. You can also string multiple actions together.



## Place Call Action

Select the Account that was created earlier that the calls will be routed through.



Enter in the “To” field the number you would like LS1000 to dial. For peer-to-peer, enter the IP Address:Port the call is intended to go to.

If that number does not answer, you can “Add Call” and select another account and phone number to dial. This is useful if you have the phone registering to multiple SIP servers/SIP PBXs. For example, you can have it call 911 from Account 1 and call 911 from Account 2 if Account 1 is down. The phone will roll over to Account 2 and call out that account.

Repeat for the number of times you want the call to rollover before answering.

Each iteration of the rolled over call uses the “Dialing/Answer Timeout.”

Note: If voicemail answers, then that is considered an answered call.

“Maximum Call Duration” is 600 seconds or 10 minutes by default. This is used as a timer in case the receiving party never hangs up the call. This timer is editable.

### **“While Dialing”**

You can select the audio of ring-back or use a custom recording that is uploaded into the phone in the Recordings page. A common recording script would be something like, “Security has been contacted; please stand by.”

This message will repeat just like ring-back would until the call is answered. This message will stop when the call is answered.

### **“When Answered”**

The default mode is two-way audio upon the call being answered.

Additional options include playing a custom recording locally out of the LS1000 speaker and/or playing a custom recording remotely to the receiving party that identifies where this call is coming from.

Note: This is a useful feature if the receiving party is not going to get a unique caller ID name/number for this location.

Once the recording has played, two-way audio will commence.

Note: If playing a remote message but not a local message, then the person at the LS1000 will hear dead air until the remote message is done playing. It is advisable to play the same message to both parties in this case.

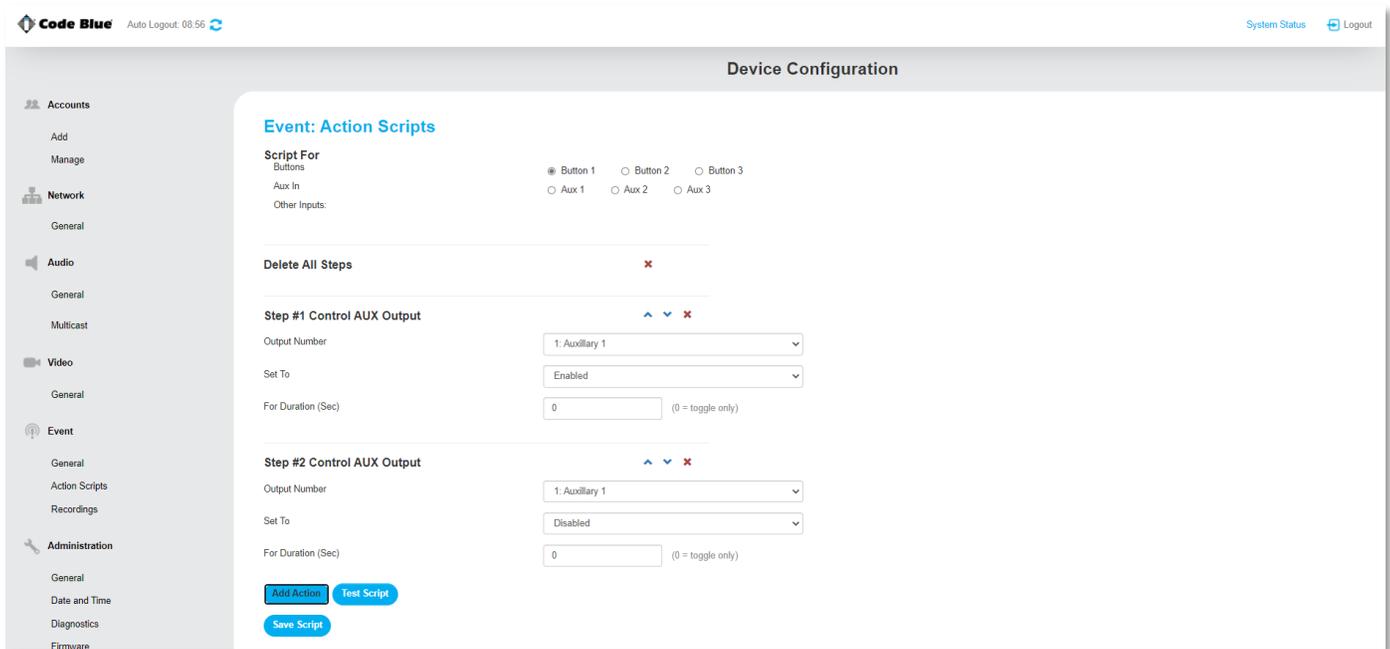
Note: It is advisable to keep your recordings short to establish connection to a two-way call as quickly as possible.

### **“In-Call Commands”**

Default is to have the in-call commands available during the phone call. These can be disabled for this action. In-call commands are also available on an inbound call into LS1000. See section on in-call commands for the full list.

## Control AUX Output

Choose the AUX output you want to control.



The screenshot shows the 'Event: Action Scripts' configuration page in the Code Blue web interface. The page is titled 'Device Configuration' and has a sidebar with navigation options like Accounts, Network, Audio, Video, and Event. The main content area is for 'Event: Action Scripts' and includes options for 'Script For' (Buttons, Aux In, Other Inputs), a 'Delete All Steps' button, and two 'Control AUX Output' steps. Each step has fields for 'Output Number', 'Set To' (Enabled/Disabled), and 'For Duration (Sec)'. There are also 'Add Action', 'Test Script', and 'Save Script' buttons at the bottom.

Choose enabled or disabled for this action. Enabled closes the normally open contact; disabled opens the normally open contact.

Choose the duration you want the action to last. (0 seconds = indefinite.)

Note: This is the most common setting for controlling an auxiliary, such as a blue light strobe, to stay activated for the duration of the call if linked to a place call action

## Play Message

Play a message when this step is reached as part of your greater action script or as the only action in your action script.

Upload your recordings by going to the Recordings page. The message only plays out of the LS1000 speaker.

Note: There are blue arrows that can move your action up and down in the action script.

Note: You can string together many actions in the action script.

A typical action script for a LS1000 may just have a Place Call Action, or if your LS1000 has a remote beacon/strobe light, then it would look like the example below to have the strobe linked to the duration of the call.

At the bottom of the action script page, you can test your action script and it will launch through the script and place a call, play a message, or trip auxiliaries.

Note: This will call whatever number you have entered in

Code Blue Auto Logout: 09:56
System Status [Logout](#)

- Accounts
  - Add
  - Manage
- Network
  - General
- Audio
  - General
  - Multicast
- Video
  - General
- Event
  - General
  - Action Scripts
  - Recordings
- Administration
  - General
  - Date and Time
  - Diagnostics
  - Firmware
  - Hardware

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### Device Configuration

#### Event: Action Scripts

**Script For**  
 Buttons  Button 1  Button 2  Button 3  
 Aux In  Aux 1  Aux 2  Aux 3  
 Other Inputs:

---

Delete All Steps ✖

---

**Step #1 Control AUX Output** ▲ ▼ ✖

Output Number

Set To

For Duration (Sec)  (0 = toggle only)

---

**Step #2 Auto Dial** ▲ ▼ ✖

Dialing:

Account

To

Call Placing:

Call Rollover

Dialing/Answer Timeout (Sec)

Maximum Call Duration (Sec)

Dialing Audio

Answer:

Play Message

Play Locally

Play Remotely

Next Action

In Call:

Incoming DTMF Commands

DTMF Aux Out Momentary Enabled (Sec)  (0 = toggle only)

Audio Output  Speaker

Outgoing DTMF

Blink Station Light

Hang Up:

Allow Hang Up on Repress

---

**Step #3 Control AUX Output** ▲ ▼ ✖

Output Number

Set To

For Duration (Sec)  (0 = toggle only)

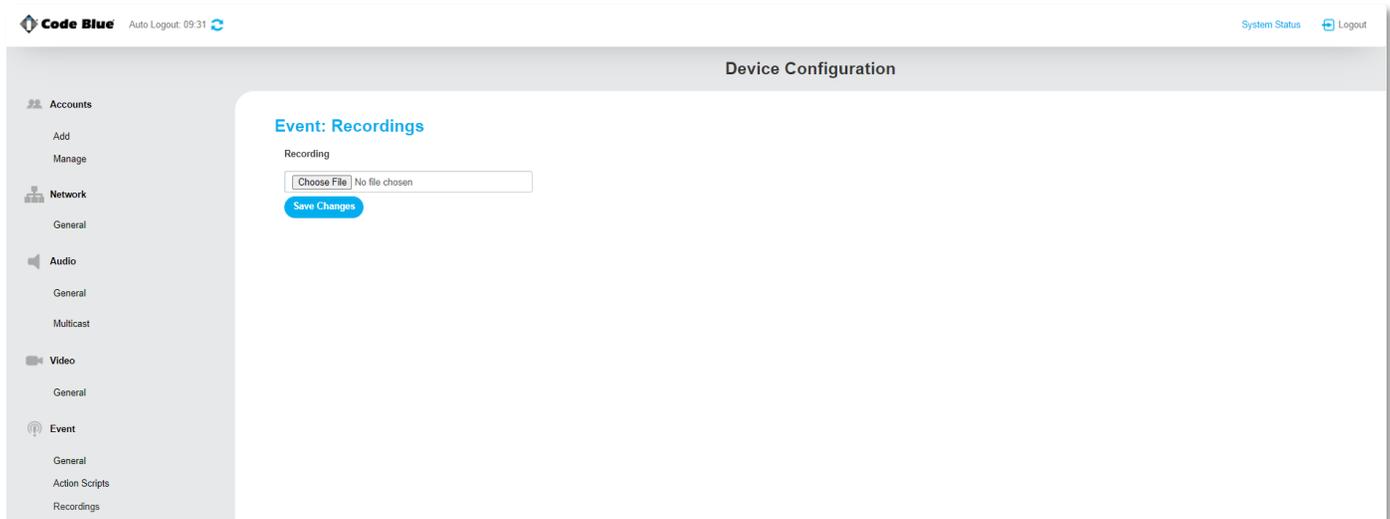
Add Action
Test Script

Save Script

## Recordings

Upload recordings into the phone on this page.

Recordings uploaded are then available in action scripts.



The phone only can play uncompressed 16-bit PCM or compressed g.711 A-law/U-law format .wav files.

If you upload unsupported audio file formats, they will not play in the action script.

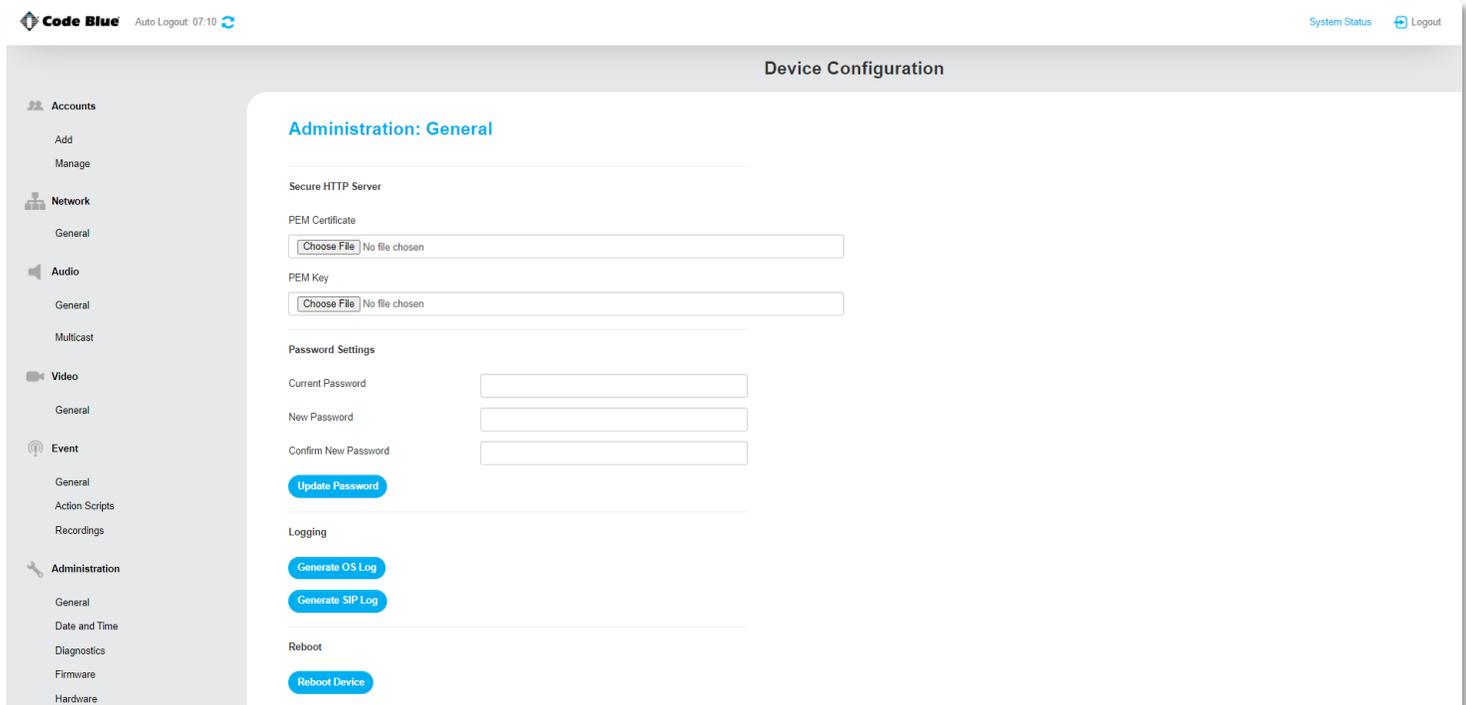
## Administration

Upload a secure PEM certificate and PEM key.

This page also allows for the default password to be changed. New passwords must be at least six characters long.

From the General Administration page, you can pull OS and SIP logs that can be used to diagnose issues with functionality and SIP registration/Call Routing.

The LS1000 can be rebooted from this page as well.

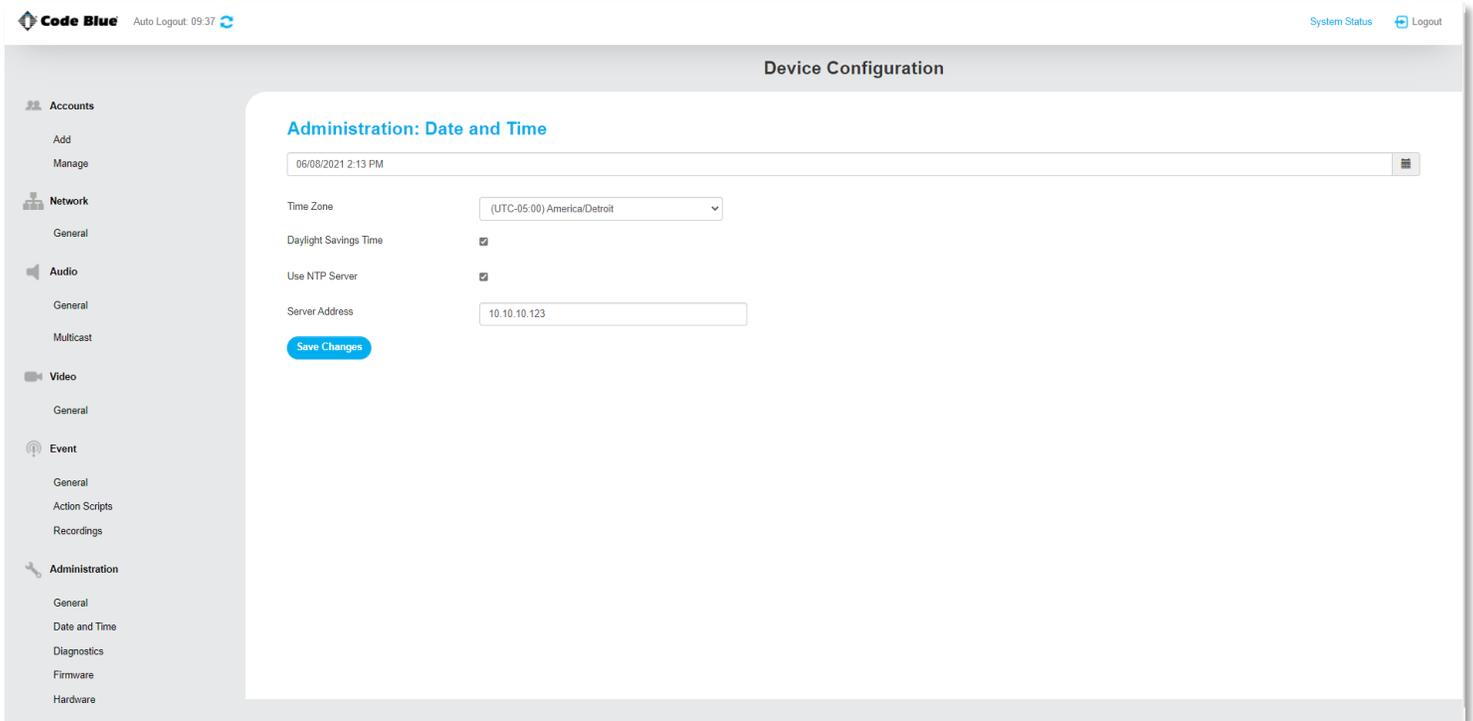


The screenshot displays the Code Blue web interface. At the top left, the Code Blue logo and "Auto Logout: 07:10" are visible. At the top right, "System Status" and "Logout" are shown. The main header is "Device Configuration". On the left, a navigation menu lists: Accounts (Add, Manage), Network (General), Audio (General, Multicast), Video (General), Event (General, Action Scripts, Recordings), and Administration (General, Date and Time, Diagnostics, Firmware, Hardware). The main content area is titled "Administration: General" and contains the following sections:

- Secure HTTP Server**
  - PEM Certificate:  No file chosen
  - PEM Key:  No file chosen
- Password Settings**
  - Current Password:
  - New Password:
  - Confirm New Password:
  - [Update Password](#)
- Logging**
  - [Generate OS Log](#)
  - [Generate SIP Log](#)
- Reboot**
  - [Reboot Device](#)

## Date and Time

Adjust the date and time on this page or point the phone to a NTP server to have a permanent time source.

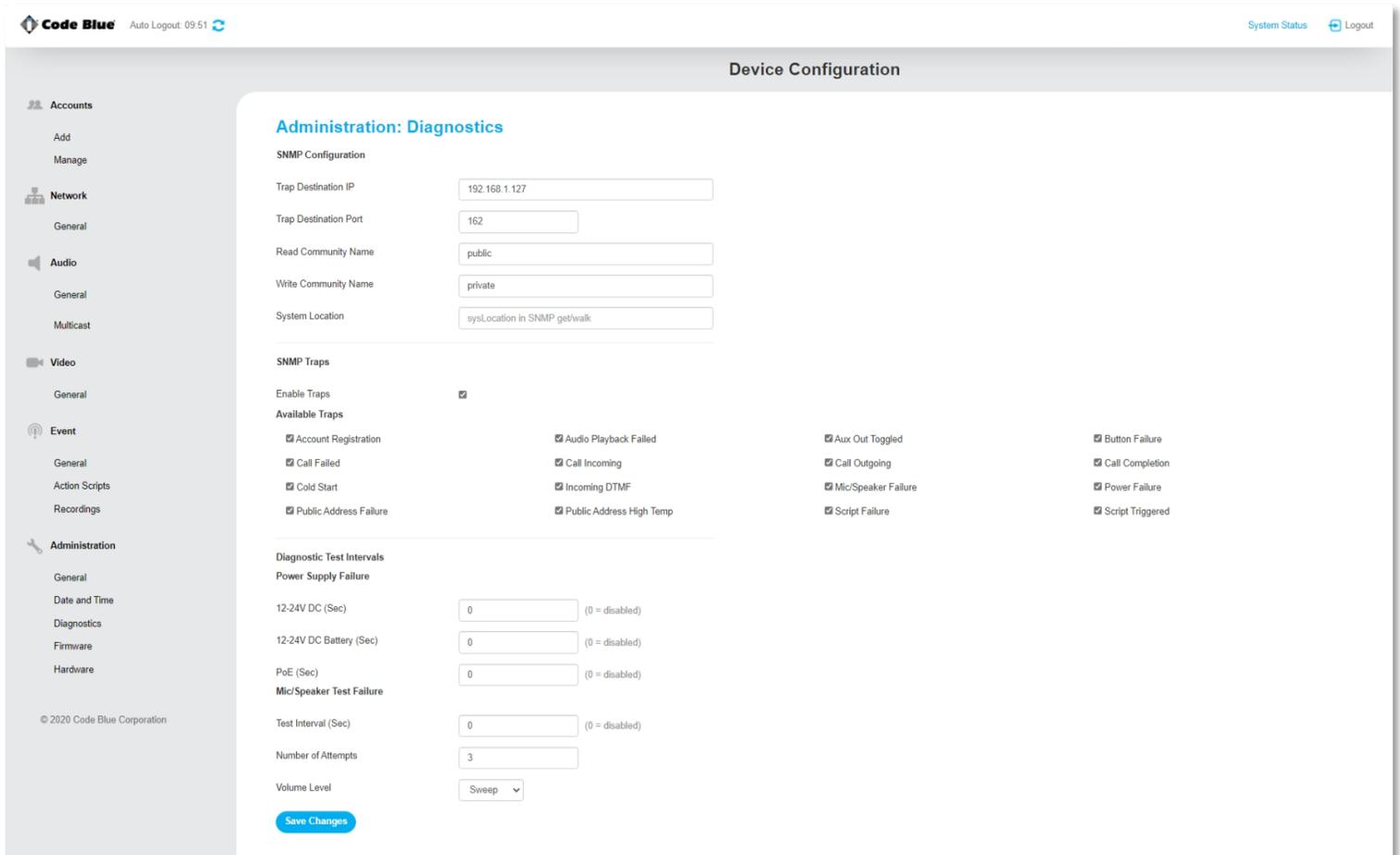


The screenshot displays the Code Blue web interface. At the top left, the Code Blue logo is visible next to the text "Auto Logout: 09:37". At the top right, there are links for "System Status" and "Logout". The main content area is titled "Device Configuration" and contains a sub-section "Administration: Date and Time". This section includes a date and time display showing "06/08/2021 2:13 PM". Below this, there are configuration options: "Time Zone" is set to "(UTC-05:00) America/Detroit"; "Daylight Savings Time" is checked; "Use NTP Server" is checked; and "Server Address" is set to "10.10.10.123". A "Save Changes" button is located at the bottom left of the configuration area. On the left side of the interface, there is a navigation menu with categories: "Accounts", "Network", "Audio", "Video", "Event", and "Administration". Under "Administration", the "Date and Time" option is selected.

## Diagnostics

With SNMP Traps enabled, enter the SNMP server name, port number (162 by default) and Read/Write Community Names.

Each trap can be enabled or disabled to customize the output.



The screenshot shows the 'Administration: Diagnostics' configuration page in the Code Blue web interface. The page is titled 'Device Configuration' and includes a sidebar with navigation options like Accounts, Network, Audio, Video, Event, and Administration. The main content area is divided into three sections:

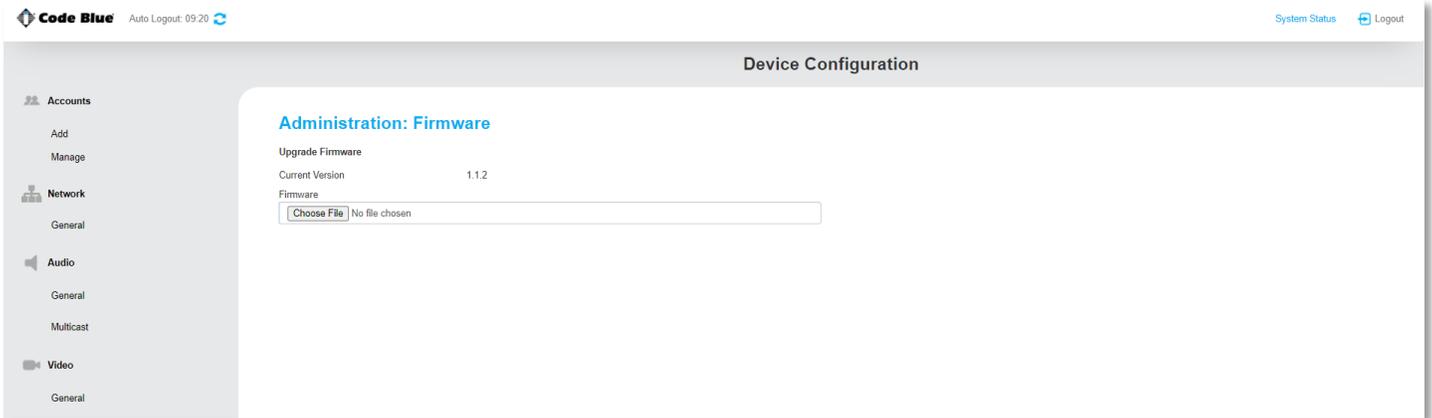
- SNMP Configuration:** Fields for Trap Destination IP (192.168.1.127), Trap Destination Port (162), Read Community Name (public), Write Community Name (private), and System Location (sysLocation in SNMP get/walk).
- SNMP Traps:** A section where 'Enable Traps' is checked. Below it, a grid of checkboxes lists available traps, all of which are checked: Account Registration, Audio Playback Failed, Aux Out Toggled, Button Failure, Call Failed, Call Incoming, Call Outgoing, Call Completion, Cold Start, Incoming DTMF, Mic/Speaker Failure, Power Failure, Public Address Failure, Public Address High Temp, Script Failure, and Script Triggered.
- Diagnostic Test Intervals:** Fields for setting test intervals in seconds: 12-24V DC (0), 12-24V DC Battery (0), PoE (0), and Mic/Speaker Test Failure (0). The 'Test Interval (Sec)' field is set to 0, and the 'Number of Attempts' is set to 3. The 'Volume Level' is set to 'Sweep'.

A 'Save Changes' button is located at the bottom of the configuration area.

The time interval for Power, Microphone and Speaker can be adjusted. By default, these are set to 900 seconds for Power Failure tests and 0 Seconds (Disabled) for Mic/Speaker tests. The volume of the Mic/Speaker test can be adjusted via a drop-down menu.

## Firmware

Upload new firmware into the phone from [www.codeblue.com/resources](http://www.codeblue.com/resources). Once you download onto your PC, unzip the file. From the LS1000 firmware page, browse to the .bin file on your PC and upgrade your LS1000.



The screenshot displays the Code Blue web interface. At the top left, the Code Blue logo and "Auto Logout: 09:20" are visible. At the top right, there are links for "System Status" and "Logout". The main header is "Device Configuration". On the left sidebar, there are menu items for "Accounts" (Add, Manage), "Network" (General), "Audio" (General, Multicast), and "Video" (General). The main content area is titled "Administration: Firmware" and contains the following information:

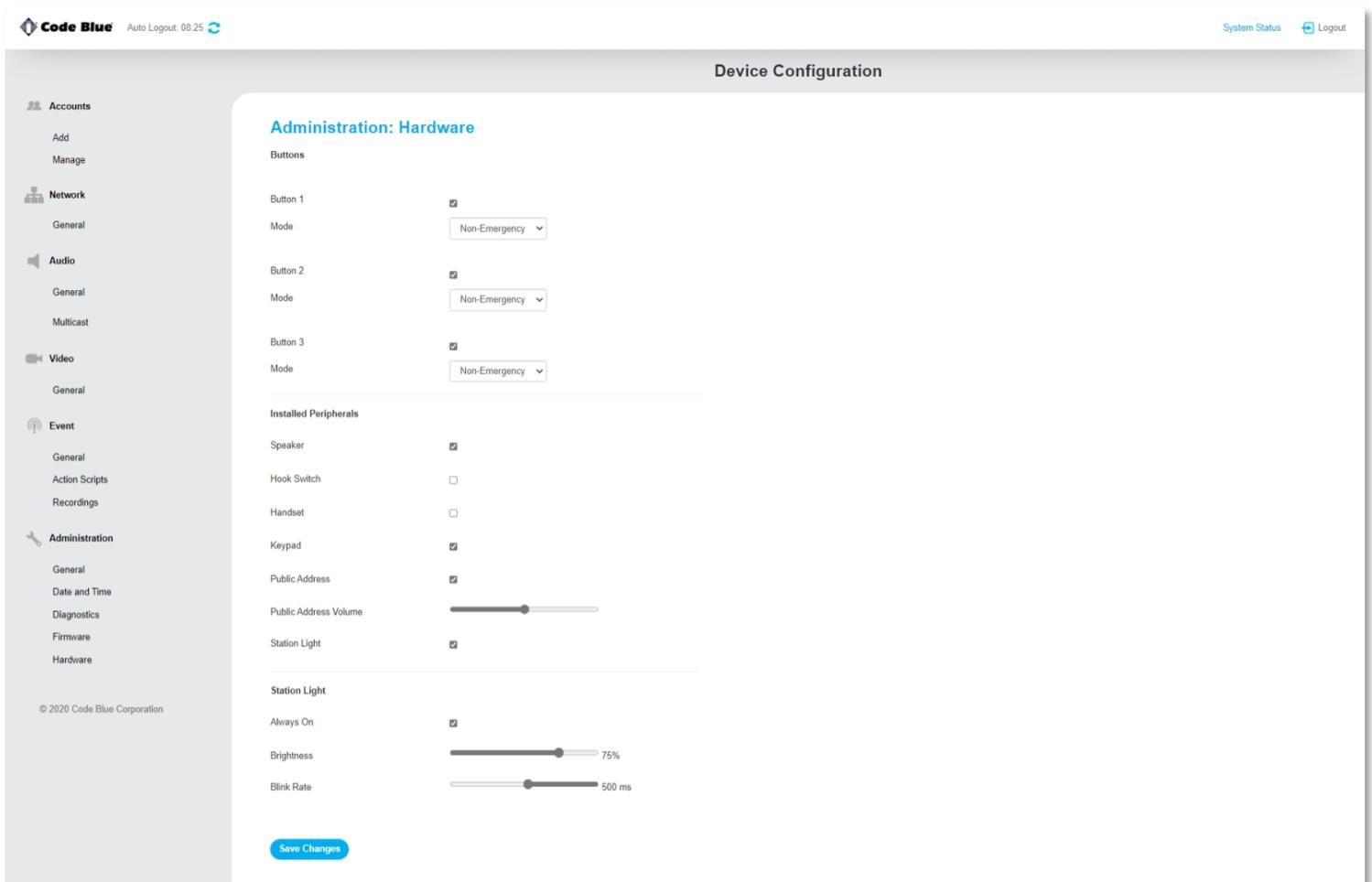
- Upgrade Firmware
- Current Version: 1.1.2
- Firmware:  No file chosen

## Hardware Settings

Hardware settings allow you to enable or disable the Station Light, adjust the brightness, and blink rate.

Each button can be configured as a Non-Emergency Button, Emergency or Volume Control. The color of the ring LED around each button can be changed in the drop-down menu.

Any additional peripherals attached to LS1000 must be marked as “Installed” to ensure functionality.



The screenshot shows the Code Blue Administration interface. The top navigation bar includes the Code Blue logo, "Auto Logout: 08:25", "System Status", and "Logout". The left sidebar contains a menu with categories: Accounts (Add, Manage), Network (General), Audio (General, Multicast), Video (General), Event (General, Action Scripts, Recordings), and Administration (General, Date and Time, Diagnostics, Firmware, Hardware). The main content area is titled "Device Configuration" and "Administration: Hardware".

**Buttons**

Button	Mode
Button 1	Non-Emergency
Button 2	Non-Emergency
Button 3	Non-Emergency

**Installed Peripherals**

Peripheral	Installed
Speaker	<input checked="" type="checkbox"/>
Hook Switch	<input type="checkbox"/>
Handset	<input type="checkbox"/>
Keypad	<input checked="" type="checkbox"/>
Public Address	<input checked="" type="checkbox"/>
Public Address Volume	<input type="range" value="50"/>
Station Light	<input checked="" type="checkbox"/>

**Station Light**

Setting	Value
Always On	<input checked="" type="checkbox"/>
Brightness	75%
Blink Rate	500 ms

[Save Changes](#)

## 9 In-Call Commands

You can make adjustments during a live phone call with the LS1000 device. This can be done by calling into the LS1000 or by a call initiated by the LS1000 to the receiving party. The party with the touch-tone phone can use the keys on their keypad via DTMF tones to make adjustments.

In-Call Command	Function	Description
4	Aux 1 Output	Toggle contact closed/open
5	Aux 2 Output	Toggle contact closed/open
6	Increase Mic Gain	Small adjustments to LS1000 microphone
7	Decrease Mic Gain	Small adjustments to LS1000 microphone
8	Increase Speaker Gain	Small adjustments to LS1000 speaker
9	Decrease Speaker Gain	Small adjustments to LS1000 speaker

**Note:** These adjustments do not persist after the call has ended. The LS1000 phone will return to the default levels set in the account screen via the phone's web GUI. See the Accounts chapter for further information.

## 10 Compatibility

LS1000 is a SIP version 2.0 (RFC3261) device and is compatible with IP Gateways and PBXs that can register third party SIP devices.

**You must verify that the IP PBX you are registering LS1000 to can handle third party SIP devices, whether through licensing and/or hardware add-ons. Please note that LS1000 currently does not work with a separate Proxy Server. SIP registration and calls must point to the same domain/IP Address SIP Server.**

Examples of mainstream IP PBXs LS1000 has registered to as a third party SIP device include:

Avaya  
Asterisk  
Cisco Call Manager  
Nortel and many others...

## 11 Configuring for Cisco Unified Call Manager

### 1. **PREPARATION**

1. Record the MAC address and determine the current IP address for each LS1000 device you wish to use with CUCM.
2. Determine which partition you will put the LS1000 directory numbers into.
3. Obtain one directory number for each Ce LS1000 device.
  - a. If you are going to use the LS1000's dual account configuration to register to redundant CUCM servers, obtain a second directory number for each LS1000 device.
4. Determine which calling search space you will assign to the LS1000.

### 2. **LS1000 CONFIGURATION**

### 3. **Configure Account(s)**

1. Log in to LS1000 via its web interface. The default username and password are admin and admin.
2. Select Account 1.
3. For VoIP Protocol, select SIP and RTP.
4. Under SIP Configuration, for Username/Number enter the directory number assigned in the CUCM.
5. For Display Name, enter caller ID text.
6. For Domain, enter the hostname or IP address of the CUCM subscriber you wish to register this account.
7. Insure Keep-Alive is enabled.
8. For Password, enter the password you entered into Digest Credentials under the CUCM end user.
9. Click Save.
10. Repeat steps 3-9 with Account 2 if you are using the second account.

## Other Settings

Refer to Section 6 to complete the setup of the LS1000, including Numbers, General Settings, Hardware Settings and Action Scripts. When finished, it should now register to CUCM and be able to place calls in the assigned calling search space as well as receive calls at the directory number it is configured with.

**Note: If you are setting up the LS1000 with secondary account support, make sure that you create each failover number twice.**

### 4. UCM CONFIGURATION

All UCM-side configuration is done within the Cisco Unified CM Administration web interface.

### 5. Create Phone Security Profile

1. Navigate to System > Security > Phone Security Profile.
2. Do a Find on “Third-party” to locate the Third-party SIP Device Basic - Standard SIP Non-Secure Profile. Click the Copy icon.
3. Check Enable Digest Authentication.
4. Change the Name and Description to Code Blue LS1000 Profile.
5. Click Save.

### 6. Configure End Users

For each LS1000 device, configure a new end user for SIP authentication.

1. Navigate to User Management > End User.
2. Click Add New.
3. For the User ID, enter the Directory Number of the LS1000 phone.
4. Fill in the Last Name field with the Directory Number.
  - a. The Directory Number, User ID, and Last Name fields must all be the same.

Create and record a secure SIP password and fill in the Digest Credentials and Confirm Digest Credentials fields with this password. You will be entering this password later into the LS1000.

5. Click Save.

## 7. [Configuring End Users for Secondary Accounts](#)

If you are going to use the Cen LS1000's try's secondary account functionality to register to a separate directory number to a separate CUCM node for failover support, repeat the above process using a local-use-only MAC address. A local-use-only MAC address has the U/L bit set to 1 to indicate the address is locally administered.

## 8. **Configure Phones and Directory Numbers**

For each LS1000 device, configure a new Phone and associated directory number.

1. Navigate to Device > Phone.
2. Click Add New.
3. For Phone Type, select Third-party SIP Device (Basic).
4. Enter the MAC Address of the phone in hexadecimal format; e.g. 00:50:C2:17:7B:E8 would become 0050c2177be8.
5. For Device Pool, select Default (or some other locally-configured device pool).
6. For Phone Button Template, select Third-party SIP Device (Basic).
7. For Calling Search Space, select the calling search space the LS1000 is to use.
8. For Device Security Profile, select Code Blue LS1000 Profile.
9. For SIP Profile, select Standard SIP Profile.
10. For Digest User, select the end user matching the MAC address of the phone.
11. Click Save.
12. On the left side of the screen, click Line [1] - Add a new DN.
13. Fill in the Directory Number.
14. For Route Partition, select the partition the directory number resides in.
15. Under Line 1, for Display (Internal Caller ID), enter a descriptive name for Caller ID purposes.
16. If you wish to return a busy signal for silent monitoring if the LS1000 is in use, disable Call Waiting: under Multiple Call/Call Waiting Settings, For both Maximum Number of Calls and Busy Trigger, enter 1.
17. Click Save.

## 9. [Configuring Phones and Directory Numbers for Secondary Accounts](#)

If you are going to use the LS1000's secondary account functionality, repeat the above process with a local-use-only MAC address as outlined in [Configuring End Users for Secondary Accounts](#), and specify a distinct directory number.

## 10. [Integrating InformaCast Utilizing Cisco Call Manager](#)

Access to the InformaCast emergency notification system produced by Singlewire Software frequently is included with Cisco Unified Communication Manager (CUCM). Code Blue's VoIP speakerphones (LS1000) can be registered and configured with CUCM as SIP devices that are compatible with IP Gateways and PBXs that can register third-party SIP devices.

To send audio pages from InformaCast to Code Blue speakerphones, select the Code Blue devices as end point phones for the messages. The Code Blue phones will have the ability to answer and play the audio by default.

## 12 Troubleshooting

The LS1000 is a network device. The following are tips for troubleshooting:

**Power** - Ensure the power to your device is working and rated for 802.11af/at PoE specifications if using PoE. LS1000 should only have one source of power other than a backup battery. If not using PoE, then main power needs to fall into 12-24 Volts DC.

**Ping Test** - This determines connectivity and the packet loss and latency time to and from your destination and the quality of your network connection to LS1000. If you receive no response and power is confirmed, contact your network administrator. You can also ping from within the phone towards your IP PBX to test that it can reach its IP PBX/SIP Gateway.

**Network** – If you are putting LS1000 on a network that restricts ports, then the following ports must be open for LS1000 to communicate to its appropriate IP PBX/SIP Gateway:

1. IAX2/UDP outgoing to port 4569 on IP PBX/SIP Gateway (only needed if using IAX2 instead of SIP on the accounts page).
2. SIP/UDP outgoing to port 5060 IP PBX/SIP Gateway.
3. RTP/UDP incoming from IP PBX/SIP Gateway to UDP ports 23456-23556 (configurable).

**DHCP** - LS1000 is set up for DHCP by default. If you cannot determine the IP address of your LS1000, contact your network administrator.

**Account** - Ensure your SIP account is set up correctly. Account username and password must match the account credentials on your VoIP system. This is the most common mistake with setting up SIP accounts.

**Codec** - Ensure the codec settings on your VoIP system match the LS1000 codec settings.

**Firewall** - Firewalls commonly block or partially block VoIP calls. Check with your network administrator if you cannot communicate with your LS1000 from behind a firewall.

**Note:** If you do not have a DHCP server running, use a standard home/wireless router and plug your speakerphone and laptop into the same router. Once you know the IP Address, you can browse to it via a web browser.

## 13 Software Configuration

### Blue Alert MNS Software

Designed specifically for schools, hospitals, corporate and municipal campuses looking for an efficient way to detect and respond, Code Blue's Blue Alert<sup>®</sup> MNS is part of our First Responder package that fills a need in the marketplace for an incident response solution that is both comprehensive and cost-effective. The result is a sophisticated software solution that quickly informs and directs people in emergency situations. Blue Alert MNS is available in two editions, Audio/Visual and Messaging that are available individually or together in the Blue Alert MNS Professional Package.

### Blue Alert EMS

Blue Alert EMS (Event Management System) from Code Blue handles all incoming emergency and non-emergency events with an easy-to-use Graphical User Interface (GUI). Effectively utilize EMS for remote operation of Code Blue emergency communication devices. Open gates and AED access doors, turn the LED beacon/strobe on or off. Have a camera connected to your Code Blue unit or one mounted nearby? Simply integrate EMS with your CCTV system for instant video when your Code Blue units are activated. The Event Management System utilizes an advanced API for efficient integration with third party applications.

## 14 Remote Mount Beacon/Strobe Installation

### 1.0 ATTACH J-BOX TO THE POLE

- 1.1 Thread the banding (B) through the pole bracket (A) located on the backside of the J-box (C).
- 1.2 Wrap the banding around the pole. Cut the banding to desired length.
- 1.3 Using a screwdriver or nut driver, tighten the banding and make sure that the unit is in the desired location.

**NOTE:** J-box must be positioned so weep hole faces down.

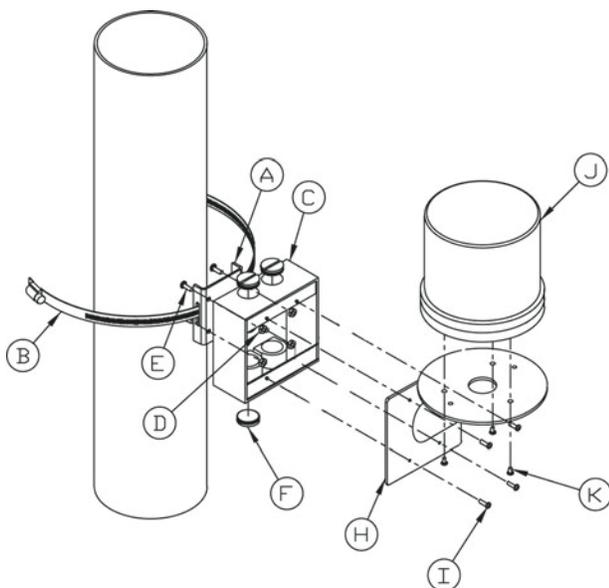
### 2.0 ATTACH LIGHT TO BRACKET

- 3.1 Using the three M4 X 8 screws enclosed (K), fasten the strobe (J) to the round portion of the strobe bracket.

*NOTE: If the beacon/strobe is mounted upside-down, a drain hole must be drilled into the lens to prevent it from filling with water.*

### 3.0 ATTACH LIGHT AND BRACKET TO THE J-BOX

- 4.1 Connect all wiring from the strobe to the wiring from the unit inside of the J-box using wire nuts.
- 4.2 Attach strobe bracket to the J-box using four 6-32 X 1/2 screws as shown.

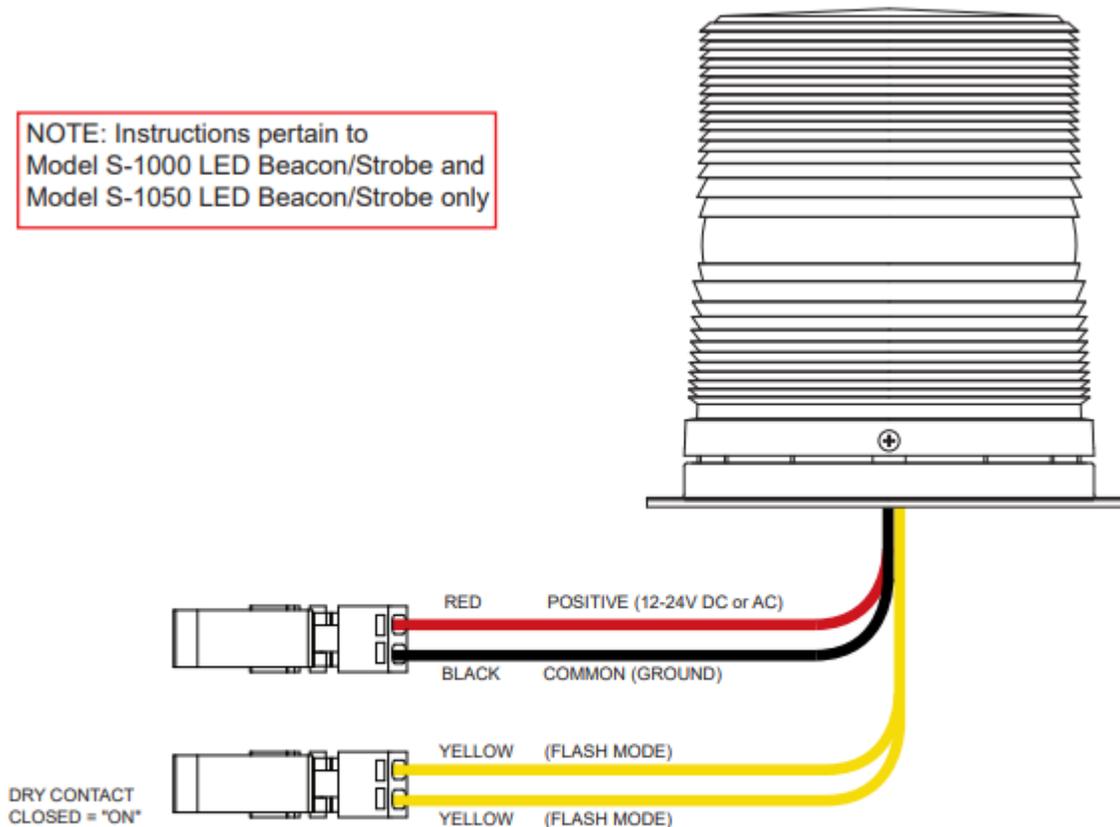


- A - pole-bracket
- B - banding
- C - J-box
- D - pole-bracket mount nut (4 each)
- E - pole-bracket mount screw (4 each)
- F - conduit plug
- H - strobe-bracket I - 6-32 X 1/2 screws (4 each)
- J - strobe light
- K - M4 X 8 screws (3 each) (Low voltage)
- K - 10-24 X 3/4 screws (2 each) (High voltage)

All wiring must be installed and connected by experienced and certified personnel to meet local and national electrical codes and will include a service disconnect.

## 15 S-1000/S-1050/S-2000 Beacon/Strobe Installation Instructions

**NOTE:** Instructions pertain to Model S-1000 LED Beacon/Strobe and Model S-1050 LED Beacon/Strobe only



**CAUTION: REMOVE ALL POWER FROM UNIT BEFORE SERVICING.**

**ATTENTION: WHEN REPLACING A BEACON/STROBE ON THE MODEL CB 5 SERIES ONLY, MOUNTING SCREW THREADS MUST BE COATED TO PREVENT WATER LEAKAGE INTO THE UNIT.**

### OPERATION

To activate the LEDs in the PRIMARY-STEADYBURN MODE, connect the BLACK and RED wires to 12-24 volts AC or DC.

When in PRIMARY-STEADYBURN MODE, to change the LEDs to SECONDARY-FLASH MODE, connect both YELLOW control wires together (i.e., CLOSED = ON).

### PHOTOCELL FEATURE (S-1050 MODEL)

The Steadyburn Mode will be ON in dark or night ambient environments and OFF in bright or daylight ambient environments. The S-1050 LED Beacon/Strobe has two built-in photo response features: (a) dawn/dusk transition delay of 15-30 minutes and (b) transient light acknowledgement delay of at least 3 minutes.

#### PROGRAMMING PRIMARY & SECONDARY MODES

1. Remove power from unit.
2. Short the Yellow wires together.
3. Restore power to the unit and wait until the unit begins to flash. Once the unit begins to flash, remove the short. The unit will alternately demonstrate the Secondary-Flash Mode and Primary-Steadyburn Mode that will be displayed during operation. For approximately 4 seconds the Secondary-Flash Mode will be demonstrated, followed by the Primary-Steadyburn Mode.
4. To select the next mode of operation, momentarily short the yellow wires. The unit will cycle to the next mode in the list above.

MODE NUMBER	PRIMARY-STEADYBURN MODE	SECONDARY-FLASH MODE
1	High	Single - 60 FPM
2	OFF	Single - 60 FPM
3	Low	Single - 60 FPM
4	High	Single - 150 FPM
5	OFF	Single - 150 FPM
6	Low	Single - 150 FPM
7	High	Single - 375 FPM
8	OFF	Single - 375 FPM
9	Low	Single - 375 FPM
10	High	Neobe - 75
11	OFF	Neobe - 75
12	Low	Neobe - 75
13	High	Neobe - 150
14	OFF	Neobe - 150
15	Low	Neobe - 150
16	High	Double - 125
17	OFF	Double - 125
18	Low	Double - 125
19	High	Double - 250
20	OFF	Double - 250
21	Low	Double - 250

5. There are seven Flash Modes and three Steadyburn Modes combinations to choose from.
6. When you reach the desired mode of operation, remove power from the unit. You **MUST** leave power disconnected for 20 seconds **BEFORE** reapplying. When power is reapplied, the unit will operate as programmed above.

**NOTE:** If you do not leave power disconnected for 20 seconds before reapplying power, the light will default to Program Mode.

<b>INPUT VOLTAGE RANGE:</b> 12-24V AC or DC		
<b>TEMPERATURE RATING:</b> -40 <sup>o</sup> C to +65 <sup>o</sup> C (-40 <sup>o</sup> F to 149 <sup>o</sup> F)		
<b>TYPICAL POWER CONSUMPTION AT 25<sup>o</sup>C</b>		
	Voltage Flash Mode	Steady Mode - High
12V DC	0.24 A Max	0.24 A
24V DC	0.12 A Max	0.12 A
12V AC	1.1 A rms Max	0.53 A rms
24V AC	0.22 A rms Max	0.22 A rms
NOTE: Average current draw in Flash Mode will vary by selected Flash Mode. The above maximum amperage draw is stated at Single 60 FPM.		

## 16 Maintenance Schedule

### LEGEND

- G** Guard tasks      **T** Technician tasks

#### DAILY OR WEEKLY

- G** Perform functional communications check  
**Action: Press button**
- Strobe activates
  - Red LED “Call Placed” light turns on
  
  - Message plays
  - Call connects, green LED “Call Received” light turns on
  - Confirm conversation clarity with dispatch

#### MONTHLY OR QUARTERLY

- G** Visually check lighting functions:
- Faceplate light
- G** Visually inspect unit for damage to:
- Faceplate
  - Piezo button
- T** Check Batteries
- Functioning with full charge.

#### BIANNUALLY

- T** Remove faceplate assembly to inspect the following:
- Ensure all electrical connections are secure.
  
  - Check all phone connections for corrosion (*If corroded, clean and coat with dielectric gel or replace*)
  - Ensure all battery connections are tight and clean
  - Verify no stains exist around gasket areas (*Stains indicate leaking and gasket should be replaced*)

Clean and coat exterior stainless-steel cabinets with cleaner/polish (*Suggested products include Chase Products*

*Champion Sprayon Stainless Steel Cleaner to help protect finish against environmental pollutants*)

Visually confirm line-of-sight is still clear to base station (i.e., confirm that new tree growth, new building construction or other obstructions are not blocking view of base station)

### UNIT SURFACE MAINTENANCE

The painted and stainless-steel Code Blue models require periodic care to sustain their aesthetic appearance. Units located outdoors are vulnerable to harsh environmental conditions, including UV rays, acid rain, diesel fumes and airborne iron particles (i.e., dust) which over time may cause unit discoloring. To prevent pollutants developing harmful chemical reactions on Code Blue units, an appropriate surface maintenance schedule should be adhered to. The Surface Care Frequency table below provides general guidelines to assist in configuring a schedule. Please note that the frequency of care required to guard the Code Blue unit's surface from damage will also be dictated by local environmental characteristics.

#### LEGEND: POLLUTANTS LEVEL

Low	★
Low/Moderate	★★
Moderate	★★★
Moderate/High	★★★★
High	★★★★★

#### SURFACE CARE FREQUENCY

	MONTHLY	BIMONTHLY	QUARTERLY	BIANNUAL	ANNUAL
Painted		★★★★★	★★★★	★★★	★
Stainless Steel	★★★★★	★★★★	★★★	★	

See scheduled tasks under Biannually for suggested paint sealants or stainless-steel cleaners.

### AVERAGE COMPONENT LIFE

Component life is based on various mechanical, operational, and environmental factors. Your local Code Blue reseller can assist you with a regularly scheduled maintenance program customized to your individual site requirements.

## 17 Warranty

Code Blue Corporation provides a limited warranty on this product. Refer to your sales agreement to establish the terms. In addition, Code Blue's standard warranty language, as well as information regarding support for this product while under warranty, is available at [www.codeblue.com/support/downloads](http://www.codeblue.com/support/downloads).

### **In Case of Breakdown**

In case of system breakdown, discontinue use and contact:

Tech Support at [ts@codeblue.com](mailto:ts@codeblue.com) or call [800-205-7186](tel:800-205-7186), option 3.

### **In Case of Abnormal Operation**

If the unit emits smoke or an unusual smell, if water or other foreign material enters the enclosure, or if you drop the unit or damage the enclosure, power off the unit immediately and contact:

Code Blue Customer Service at [customerservice@codeblue.com](mailto:customerservice@codeblue.com) or call Customer Service at [800-205-7186](tel:800-205-7186), option 2.

## 18 Additional Download Links

**Code Blue now has a centralized location where you can find installation, setup, information, configuration, and operation instructions.**

1. Centry<sup>®</sup> Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
2. CB 1 Series Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
3. CB 2 Series Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
4. CB 4 Series Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
5. CB 5 Series Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
6. CB 9 Series Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
7. CB RT Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
8. Phone Enclosures Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
9. Stainless Steel Maintenance Guide: [www.codeblue.com/support](http://www.codeblue.com/support)
10. IA4100 Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
11. IP5000 Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
12. IP1500/2500 Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
13. ToolVox<sup>®</sup> X3 Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
14. Public Address Administrator Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
15. Blue Alert<sup>®</sup> MNS User Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
16. Blue Alert<sup>®</sup> EMS User Guide: [www.codeblue.com/resources/guides](http://www.codeblue.com/resources/guides)
17. IP1500/IP2500 Firmware: [www.codeblue.com/support/firmware](http://www.codeblue.com/support/firmware)
18. IP5000 Versions 1.X & 2.X Firmware: [www.codeblue.com/support/firmware](http://www.codeblue.com/support/firmware)

### **For Legacy Product Information:**

[www.codeblue.com/legacy-products](http://www.codeblue.com/legacy-products)

These guides should contain all the information needed for your application. If further information is required, please contact [customerservice@codeblue.com](mailto:customerservice@codeblue.com).